



*Arizona Administrative Register*

**Notices of Final Rulemaking**

---

Implementing statutes: A.R.S. §§ 32-3903(A)(6), 32-3922(A)(1), 32-3922(A)(2), 32-3922(A)(3), 32-3922(C), 32-2924, 32-3925(C), 32-3925(D), 32-3926(A), 32-3926(C), and Laws 1998, Chapter 239, Sec. 3

**3. The effective date of the rules:**

June 12, 2000

**4. A list of all previous notices appearing in the Register, addressing the final rule:**

Notice of Rulemaking Docket Opening: 5 A.A.R. 1540, May 21, 1999

Notice of Proposed Rulemaking: 6 A.A.R. 844, March 2, 2000

**5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

Name: Jean Wise

Address: 1400 West Washington, Room 230  
Phoenix, Arizona 85007

Telephone: (602) 542-3095

Fax: (602) 542-3093

**6. An explanation of the rule, including the agency's reasons for initiating the rule:**

The rules implement new statutes that were passed during the 1998 legislative session to create the Acupuncture Board of Examiners. The rules provide definitions; operational procedures for the Board; timeframes for Board approvals; application requirements for acupuncture, auricular acupuncture, visiting professors, and those seeking acupuncture licensing through grandfathering; standards and procedures for approval of acupuncture programs, auricular acupuncture training programs, clean needle technique courses, clinical training, and continuing education courses; regulation of treatment by acupuncture students and recordkeeping; and public participation procedures.

**7. A reference to any study that the agency proposes to rely on in its evaluation of or justification for the proposed rule and where the public may obtain or review the study, all data underlying the study, any analysis of the study, and other supporting material.**

Not applicable

**8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**

Not applicable

**9. The summary of the economic, small business and consumer impact:**

Cost impacts for the Board in making these rules will be moderate and include the cost of the rule consultant assisting with this rule adoption. There is also a remote possibility of additional cost to the Board in the event that it fails to meet the timeframes for approvals and must refund licensing or certification fees. Costs incurred by the Board in implementing this comprehensive regulatory scheme of individual licensure and certification, and program approvals will be substantial, with an estimated annual budget of approximately \$40,000.

The cost of promulgating these rules will have a minimal impact on the Governor's Regulatory Review Council and the Office of the Secretary of State. Minimal or no impacts are expected for any other agencies or political subdivisions of the state. Similarly, little or no cost impacts would be expected for consumers.

Fees to be incurred by applicants for acupuncture licensure, auricular acupuncture certification, visiting professor certification, or renewal will be minimal, ranging from a maximum of \$250 to \$600. Other statutory fees are also minimal. Other applicant costs will likely include costs for obtaining copies of official records and documenting education, and may include the cost of translating documents into English. Educational costs for persons seeking acupuncture licensure is estimated to be between \$10,000 to \$25,000 per year for a 3 or 4-year program of study. For auricular acupuncture, costs are anticipated to be much lower as the training is much shorter and less rigorous. Costs for continuing education are estimated to range from \$200 to \$400 for the required 15 annual units of continuing education credit.

Costs for approval of acupuncture and auricular acupuncture programs, and clean needle technique courses are expected to be minimal, with the only real costs in completing and mailing the applications to the Board. Costs for existing programs to meet the standards for approval should be minimal as they are consistent with the existing accrediting agency standards with which existing programs already comply. However, costs to establish a new acupuncture program would be very expensive, involving provision for faculty, facilities, materials, and the necessary infrastructure. Costs for a new auricular acupuncture program would be minimal to moderate. Costs for a new clean needle technique course are expected to be minimal.

Current practitioners of acupuncture should incur only minimal costs in obtaining licensure through grandfathering. Costs would be in documenting that the applicant meets the statutory qualifications, particularly in having a CPA present a certified opinion of the applicant's practicing at least 2 years during the past 5 years. This could possibly cost several hundred dollars.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

The principal benefit to be derived from implementing this comprehensive regulatory structure for acupuncture is the protection of public health and safety through assurance of properly educated and trained practitioners in programs that meet essential basic standards. While the costs for the system are ultimately passed to consumers of the services, the benefits outweigh such costs.

“Minimal Cost” as used in this Section means an amount less than \$1,000.

**10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):**

At R4-8-101, insert a new definition number 1 to read: “ACAOM” means the Accreditation Commission for Acupuncture and Oriental Medicine.” Alphabetize and renumber the subsequent definitions.

At R4-8-101(10), insert “and use” after “sterilization”.

At R4-8-102(A), replace the two “documents” in the first sentence with “a document” and “document”.

At R4-8-102(B), replace “agency” by “entity”.

At R4-8-102(C), replace “all documents” by “a document”, insert “original” before “English”, replace “the accuracy of which is certified by the translator” by “performed by a qualified translator. The translation must be accompanied by an Affidavit of Accuracy in which the translator who performed or verified the translation affirms that the entire document has been translated, that nothing has been omitted or added, and that the translation is true and correct. An original translation will be returned to the applicant only if a photocopy of the entire translation, including the Affidavit of Accuracy, is provided”.

At R4-8-102, insert a new subsection (D) to read:

D. The following persons are regarded as qualified translators:

1. An officer or employee of an official translation bureau or governmental agency.
2. A professor or instructor who teaches the translated language in an accredited college or university in the United States. The Affidavit of Accuracy shall include the name of the course taught, be on the official letterhead of the school, and be notarized.
3. An American consul in the country where the translated document was issued. If a private translator translated the document, the American consul shall verify both the contents of the translation and the identity of the translator.
4. A consul general or diplomatic representative accredited in the United States, or other representative of a foreign government agency. The representative shall verify the contents of a translation performed by a private individual.

and reletter existing subsection (D) to (E).

At R4-8-102, relettered (E), delete “shall be”.

At R4-8-103, revise the last portion of the sentence to read: “. . . of mailing address (giving both the old and the new address), or residential . . .”

At R4-8-104(B), delete “the office of the State of Arizona Board of Acupuncture Examiners”.

At R4-8-104, delete “C. All special meetings of the Board shall be set at the direction of the Chairman.”

At R4-8-105(B)(1), replace “a” by “an” before “acupuncture”, replace “applicant passes the Board Clinical Competency Examination” by “Board receives an application packet”.

At R4-8-105(C), delete “an” before “official”.

At R4-8-106(A), replace “The Board shall deem an” by “An”, insert “is” after “application”, and delete the second sentence.

At R4-8-201(1), insert “auricular” before “acupuncture services”.

At R4-8-201(1)(c), replace “with” by “and if so,” and replace “states” by “jurisdictions in which the applicant has been permitted by law to practice acupuncture”.

At R4-8-201(2), insert “application and initial licensing” before “fees”, replace the semicolon after “Board” with a period, and insert “If the Board denies licensure, the initial licensing fee shall be refunded;”

At R4-8-201(3), insert “auricular” before “acupuncture”.

At R4-202(A), replace “or as are otherwise allowed under A.R.S. § 32-3922(B)” by “the State of Arizona, or the federal government, and only under the supervision of a person licensed to practice acupuncture in Arizona”.

At R4-8-202(B), insert, after “agency”, “under A.R.S. Title 36, Chapter 4”.

At R4-8-203(1)(c), insert “any other country or subdivision of a” before “country”, replace “with” by “and if so,”, and replace “states” by “jurisdictions in which the applicant has been permitted by law to practice acupuncture”.

At R4-8-203(1)(g), after “States” delete the semi-colon and insert “, or any other country or subdivision of any country,”.

At R4-8-203(2)(b). delete “and scores for”.

At R4-8-203(2)(c), replace “by” by “to practice acupuncture in”, replace “with no” by “and that the applicant’s”, and insert “has not been” before “revoked”.

At R4-8-203(5), replace “fee” by “application and initial licensing fees” and insert a new second sentence to read: “If the Board denies licensure, the initial licensing fee shall be refunded.”

**Arizona Administrative Register**  
**Notices of Final Rulemaking**

---

- At R4-8-204(B), replace “licensee” by “license” in two places and insert a comma after “form” and “Board”.
- At R4-8-204(C), replace “or certificate, a licensee or certificate” by “, a license”, delete “attendance in”, and replace “A.R.S. § 32-3925(C)” with “R4-8-205”.
- At R4-8-204(D), replace “licensee” by “license” and capitalize “chapter”.
- At R4-8-205(A), replace “licensee” by “license holder” and delete “or certificate holder”.
- At R4-8-205(B), delete “or certificate”.
- At R4-8-205(G), replace “medial” by “medical”
- At R4-8-205, insert a new subsection to read: “H. A licensed acupuncturist may receive 10 hours of continuing education for each Article written on the practice of acupuncture or oriental medicine that is published in a peer-reviewed professional journal during the year for which the hours apply.”
- At R4-8-206(A), replace “licensee” by “license holder”, delete “or certificate” and “or certificate holder”, and replace “affirmation” by “affidavit”.
- At R4-8-206(B), replace “licensee” by “license holder”, and delete “or certificate”, “or certificate holder”, and “or certification”.
- At R4-8-206, delete: “C. A person whose license or certificate is expired for more than 3 years and who reapplies for licensure or certification shall take and pass a clinical competency examination before a new license or certificate will be issued.”
- At R4-8-207(A), delete “or certified” and insert “any of” before “the following”.
- At R4-8-207(A)(2), insert “outside the United States” after “service” and replace “1 year” by “6 months”.
- At R4-8-207(B), delete “or certificate”.
- At R4-8-207(C), replace “reapplied” by “applied”.
- At R4-8-209(A)(1)(c), replace “issue” by “issuance”.
- At R4-8-209(A)(2), replace “required initial license fee” by “application and initial licensing fees prescribed by the Board. If the Board denies the application, the initial licensing fee shall be refunded”.
- At R4-8-209(A)(3), replace “June 2” by “May 29”.
- At R4-8-209(A)(4), insert “minimum” before “competency”.
- At R4-8-210(A)(1), replace “knowledge and” by “minimum”.
- At R4-8-210(A)(2), insert “scaled” before “score” and delete “on each part of the test”.
- At R4-8-210(B), replace “60” by “30”, replace “The number of times an” by “An” and replace “is limited solely by” by “as many times as it is offered before”.
- At R4-8-210(C), replace “minimal” by “minimum”.
- At R4-8-301(A)(2), insert “board-approved” before “national” and replace “agency” by “entity”.
- At R4-8-304(B), insert “clinical” before “training” and replace “at” by “of”.
- At R4-8-304(C), replace “An” by “To be approved by the Board, an”.
- At R4-8-305, delete “but not limited to,”.
- At R4-8-307(A), replace “current course catalog with a letter outlining the following” by “letter attesting that the program continues to meet the standards of R4-8-303 and R4-8-304, and a course catalog that includes”.
- At R4-8-307(A)(1), replace “Any courses added, deleted, or substantially changed from the previous year’s curriculum” by “Course descriptions of the next years’ proposed curriculum”.
- At R4-8-307(A)(2), replace “Any changes in” by “The”.
- At R4-8-307(A)(3), replace “Any substantial changes in” by “A description of”.
- At R4-8-307(D), replace “substantial changes to the facility, clinic, or curriculum” by “failure to comply with R4-8-303 and R4-8-304”.
- At R4-8-308(A)(3)(c), insert “and” after the comma.
- At R4-8-308(A)(3)(d), replace “, and” by a period.
- At R4-8-308(A)(3)(e), delete the subsection.
- At R4-8-308(B), replace “The Board shall not approve courses designed to be completed by an individual on an independent or home-study basis.” by “The Board shall approve for continuing education credit, without application, any course approved by a board of acupuncture licensing in another state, any course provided by the Continuing Education Council of NCCAOM or the National Alliance for Acupuncture and Oriental Medicine, and any course provided by a board-approved acupuncture training program.”.
- At R4-8-309(A)(1), replace “provider” by “provider’s identification”.
- At R4-8-309(A)(4), insert “and” after the semi-colon.
- At R4-8-309(A)(5), replace “; and” with a period.
- At R4-8-309(A)(6) delete “6.All proposed public advertisements that the provider intends to use to advertise the course. If the provider uses a public advertisement that is developed after the course is approved and that was not provided to the Board with the course approval request, the provider shall mail a copy of the advertisement to the Board within 10 days after its publication.”
- At R4-8-310(A) and (B), replace “revoke” by “withdraw”.

**Notices of Final Rulemaking**

At R4-8-401(1) and (2), replace “a” before “patient” by “the”.

At R4-8-401(2), insert “in the clinic” after “present”.

At R4-8-401, delete “3. Have a supervisor physically present at all times during the diagnosis and treatment of a patient during a student’s initial 235 hours of diagnosis, evaluation, and clinical practice;” and renumber the subsequent sections.

At R4-8-402, delete “but not limited to” and insert “the name of the patient, dates of treatment,” after “including”.

Insert a new R4-8-403 to read:

R4-8-403. Supervision of Auricular Acupuncturists

A licensed acupuncturist supervising an auricular acupuncture certificate holder shall be promptly available in person, by phone, or electronically during normal working hours, and shall meet onsite with certificate holders at least once a month to assess compliance with these laws and rules.

**11. A summary of the principal comments and the agency response to them:**

<b>Rule</b>	<b>Change</b>	<b>Reason/ Question</b>	<b>Board’s response</b>
All	objection to all rules being enacted	because apprenticeship rules aren't included and alleges violations of open meeting laws	“Going to proceed: had made substantial progress on these, working on apprenticeship packet. Not aware of any facts supporting allegations that meetings held in violation of open meeting law”
Preamble (Paragraph 4)	“acupuncture” to “acupunc-ture” and “recordkeeping” to “record keeping”		correct acupuncture spelling; recordkeeping as one word
Preamble (Economic Impact Summary)	“impact is not “minimal” financially for those put out of business, or health-wise for their patients”	will put acupuncturists out of business	no change; amount needed to maintain the Board’s operations
Preamble (Economic Impact Summary)	change impact level of license fee & CPA documentation	“\$600 is not minimal; several hundred dollars not minimal, either”	no change; fees needed to maintain the Board’s operations. CPA fees beyond scope of rule; need for CPA set in law.
Preamble (Economic Impact Summary)		“fee range is prohibitive, particularly to auricular detox practitioners”	already set in Jan; amount money Board needs to operate. Will look into revisiting auricular fees.
R4-8-101	add new definition: Oriental Medicine	“since oriental medicine is mentioned in statute, should be defined”	not necessary to define. One reference is part of a title; (NCAOM); other is A.R.S. § 32-3953 (grandfathered rights) very broad to define; very recognizable when determining training for grandfathered rights.
R4-8-101	add definition of Oriental Medicine	because term is in the law	not necessary to define. One reference is part of a title; (NCAOM); other is A.R.S. § 32-3953 (grandfathered rights) very broad to define; very recognizable when determining training for grandfathered rights.
R4-8-101(10)	after “sterilization” insert “and use”	“seems clearer, clean needle not only about sterilizing, but using properly”  “not definition in Clean Needle Technique; 4th edition, standard of these rules”	make recommended change  taken care of by insertion of “use”

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-102(A)		define "seal"	common term; too limiting to define
R4-8-102(B)		what if agency issuing the documents will not send them to 3rd parties	The Board requires that the applicant has exercised diligence in requesting that the documents be sent from the source. In the event that the source refuses to send directly, the Board will look to other independent means to verify the information.
R4-8-102(C)		who certifies trustworthiness of translators	"willing to accept the school's translation, as long as it comes from school Other rules provide sufficient safeguard of trustworthiness of application"
R4-8-102 (C) & (D)	see revised R4-8-102 (D) (also: re-letter former D to E).	concerned about potential for fraud in a translator's credibility and honesty; is perjury the standard remedy? Any way to strengthen?	adopted language to set standards for documenting authenticity of translation
R4-8-103	"and" to "and/or"	Allow people who don't have business telephone to comply	"and" is presumed to mean that if don't have both, only provide what have. The same phone number may serve as both a residential and business number.
R4-8-103	"20 days" to "30 days" for licensee to notify Board of change of address		No change. Board believes that time is sufficient to timely notify the Board. Not unduly burdensome and it is important for Board to be kept current on practice location.
R4-8-104	after "January" insert, "and every other month thereafter."	to ensure Board meets at least 6 times a year	governed by statute: have to meet in January; quarterly
R4-8-104(B)	change "20" to "30 - 60 days", "90" days	to allow constituents to clear schedules and attend meetings; to allow time to prepare and review appropriate information; and ensure maximization of attendance by both public and Board	leave notice at 20 days. Attention that this is for annual meeting only; and does not require Board to finalize its agenda at 20 days prior
R4-8-104(C)	change "chairman" to "any Board member" after the word "Chairman", insert "or a majority of the Board"	ability to call special meetings should not be limited to chairman; power should be more equally distributed	delete: A.R.S. § 32-3902(e); makes it redundant
R4-8-105	Change "an" application to "a complete" application	Seems reasonable to start review when complete application is received	"proposal more restrictive. Now can start application process, use administrative review time to gather as intended under license timeframe laws"
R4-8-201	"and" to "and/or"	Allow people who don't have business telephone to comply	and already means that; suffices

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-201	“add exemptions for those: 1) not, never been licensed acupuncturist; and 2) employed at behavioral health agency and practicing auricular solely for that agency”	“primary job of auriculars is not acupuncture, but substance abuse; certification costly and difficult”	No change. Covered by A.R.S. § 36-3922
R4-8-201(1)	“acupuncture” be replaced with “detox auricular acupuncture”	section applies only to auricular; ensure wording is consistent with limited scope of practice	change to “auricular” before acupuncture in first line
R4-8-201(3)	in first line, after “in” insert “auricular”	section applies only to auricular; ensure wording is consistent with limited scope of practice	change to “auricular” before acupuncture in first line
R4-8-201(1)(e)	not require acudetox to be evaluated	“as many substance abuse counselors have prior police records, hope Board not prohibit licensure”  “costly, and they are monitored on the job anyway”	answering “yes” doesn’t mean will be denied; Board will weigh each fairly and appropriately
R4-8-203(1)(b)	“and” to “and/or”	Allow people who don’t have business telephone to comply	“and” is presumed to mean that if don’t have both, only provide what have
R4-8-203(1)(c)		required info is unreasonable; foreign VPs who have worked in several countries have to have docs sent from all	not burdensome; same thing for regular license
R4-8-203(1)(c)	after “United States, or” add “any other country or subdivision of any country”	to be consistent with R4-8-201(c)	adopt
R4-8-203(1)(e)	add language to specify how Board will evaluate “other certifying body”	to ensure fairness to acupuncturists who are not NCCAOM diplomates; fairness to Asian-Americans who are more likely to have been apprenticed than schooled	under advisement for future packages; no need at present. At present fair to leave it broad to allow Board to evaluate all situations. Also, there is currently only one certifying body, ACAOM, the successor to NCCAOM.
R4-8-203(1)(g)	after “United States, or” add “any other country or subdivision of any country”	to be consistent with A.R.S. § 32-3924	adopt
R4-8-203(1)(h)	“new item to allow Board to determine equivalency of training based on practice prior to July 1, 1999.”	allow Board to license potential out of state applicants who were trained prior to current educational standards	beyond scope of Board statutory authority
R4-8-203(1)(j)		What must be disclosed in explanation of conviction of crime?	no action application is self explanatory

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-203(2)(b)	change to “certification that applicant passed exam”	NCAOM will violate its own publicly stated policy if it releases test scores	delete “and scores for” certification
R4-8-203(2)(c)		define “substantially similar standards”	leaving the term broad is beneficial; allows to fairly evaluate all
R4-8-204		add “inactive license” provision at a reduced fee	not within statutory authority
R4-8-205		does the 15 hour CE requirement apply to auriculars?	A.R.S. § 32-3925 refers to “licensee” but not certificate holder
R4-8-205	add language to allow continuing education credit for writing Articles (10 hrs) and books (30 hours)		adopt: 10 continuing education units for each Article on the practice of acupuncture or Oriental medicine published in a peer-review professional journal during the year for which they are apply. Not including books as no equivalent peer review system to ascertain quality.
R4-8-205(A)	strike “or certificate holder”	“require CE only of licensees, not certificate holders (auriculars & visiting professors)”	“delete: A.R.S. § 32-3925 (D) speaks only to reinstatements of licenses, not certificates”
R4-8-205(B)		Is under “penalty of perjury” standard?	“yes, standard”
R4-8-205(F)	Omit “2 hour maximum”  after “courses” insert “or acupuncture schools” Strike “2” and replace with “15”  amend to read “Instructors of approved CE courses or teaching Board approved schools may receive 1 hour of CE credit for each classroom hour taught in year for which applying”	why only 2 hours of credit per year for teaching CE? Why not 15?  NCAOM accepts teaching in a school or CE for all required CEUs  “NCCAOM allows teaching for CE, hour for hour, no limits”	“keep as is. Motion to increase teaching continuing education maximum to 4 hours died, lack of second. Board position is that it is important to get continuing education outside of yourself, to listen to others. Continuing education, not continuing review.”

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-205(G)	after “education” insert “or teaching”  delete	teaching is considered professional development activity by NCAOM; they honor all hours taught for CE  “no reason to dictate what CE people go to, hours they can go”  limiting ethics sends message it is not important	“keep as is. Motion to increase teaching continuing education maximum to 4 hours died, lack of second. Board position is that it is important to get continuing education outside of yourself, to listen to others. Continuing education, not continuing review.”  Keep as is; intent of continuing education is to promote technical knowledge as well.
R4-8-205(G)	change “medial” to “medical”	it’s a typo	Okay
R4-8-205(H)	add Section to allow CE credit for writing Articles and books	are precedents in NCCAOM & other professions	see R4-8-205(F)
R4-8-205(H)	“add new sentence to make NCCAOM and other state & internationally approved courses automatically approved by Arizona, including distance learning courses”		see R4-8-308(B) new language
R4-8-206(C)	Delete paragraph C	why should a person whose license has been expired for more than 3 years be required to test? Define Clinical Competency Exam? Who construct it? What is content?	delete C; no authority to test; retain A and B
R4-8-207(A)	Add exemption “extended family crisis or circumstances”		unnecessary to change: existing language does not restrict exemption to illness of licensee
R4-8-207(A) (2)	strike “one year” and replace it with “6 months”	“if someone was called to serve for 11 months, they’d only have 1 month available to earn CEUs”	Accept. The 6 month limit permits sufficient time for someone to still get the necessary continuing education units in the 12 month period.
R4-8-208		required info is unreasonable; foreign VPs who have worked in several countries have to have docs sent from all	Statute says 5 years of experience; necessary to keep. The Board requires that the applicant has exercised diligence in requesting that the documents be sent from the source. In the event that the source refuses to send directly, the Board will look to other independent means to verify the information.
R4-8-208 (A)(1)	R4-8-201(1) should be replaced by R4-8-203(1)	201 refers to auricular; this corrects reference to regular acupuncture license application process	written as Board wanted it to be; 201 is a shorter listing of credentials than 203

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-208 (A)(2)		specify required fees or ranges and times of re-consideration	no change because fees decided by the Board; January annual meeting
R4-8-208 (A)(3)	after "practice of" add "or research in acupuncture and oriental medicine"	"many new ideas and procedures generate from research; visiting researcher will be able to come, too"	A.R.S. § 32-3926 speaks to professors, not researchers
R4-8-208 (A)(3), (4)(a)		"creates a grossly unequal double standard, as AZ teachers not required to have any experience or document it. Doesn't directly affect safety of public"	statute doesn't permit
R4-8-208 (A)(4)(a)	after "college," add "or research institution"	to allow visiting researchers as well as professors	A.R.S. § 32-3926 speaks to professors, not researchers
R4-8-208 (A)(4)(b), (c)		time spent teaching in past 1-2 years is not indicator of teaching ability; double standards; doesn't affect public safety	covered by statute
R4-8-208 (A)(5)		"detailed plan" infringes on school's right to determine policy; may be jurisdiction of Immigration and Naturalization Service	only in relation to faculty duties, so need to know what duties are
R4-8-209	add language to specify how Board will evaluate exam data other than NCCAOM	to ensure fairness to acupuncturists who are not NCCAOM diplomates; fairness to Asian-Americans who are more likely to have been apprenticed than schooled	Board has made extensive efforts to write an appropriate test; no empirical data support assumption that preceptor-trained people can't pass minimum test; test required by law. The test was developed at a two-day workshop using volunteers from the acupuncture community. Questions and answers were drawn from two authoritative texts recommended by the community. Volunteers took the test and the test was rated to assure testing of only minimum competency. The ratings and test scores were then statistically analyzed to determine an appropriate recommended passing score.
R4-8-209 (A)(4)	add "minimum" before competency		to make references to test consistent with term in law "minimum competency test" Section (3)(B)

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-210		lack of specificity interpreted as inherent unfairness of test	Board has made extensive efforts to write an appropriate test; no empirical data support assumption that preceptor-trained people can't pass minimum test. (See Board response in R4-8-209.)
R4-8-210		allows Board to put all non-NCCAOM trained acupuncturists out of business by delaying or creating confusion about test	Board had made detailed information about the test available, including dates, times, and locations for administration of the test, and continues to do so. It has even prepared and provided a study guide.
R4-8-210(A) (2)	a "scaled" score on the test. (delete rest of sentence) "on each part of test."	what is passing point? What does "on each part of the test" mean?	based on information from Dr White, psychometrician, who developed the test, recommended a passing point of 75, which represents one Standard Deviation below the mean score. Was 90% inter-rater reliability.
R4-8-210(B)		how will December cut-off work?	Detailed information is now available from the Board. Because the law requires that an application be complete and satisfy the Board on or before December 31, 2000, it is necessary to take the exam and submit an application before the end of the year to permit the Board staff to process it and the Board to determine whether it satisfies the statutory requirements. As a result, the last exam to be given will be on December 7 with the last Board meeting approximately 2 weeks later.
R4-8-302		define "in accordance" with "Clean Needle Technique Manual"	Webster's 3rd revised meaning
R4-8-302		allow NADA course to be equivalent of Clean Needle course for detoxers	this will be considered in the future as the Board is not presently aware of a discrete clean needle technique course offered by NADA
R4-8-302(A)		"delete CE requirements, let required yearly OSHA training suffice for acudetox practitioners"	certificate holders don't have to do continuing education
R4-8-302(A)		no need for specialized training in clean needle / current NADA training includes this	disagree, leave as is

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-302(A)	language should be “either the Clean Needle Technique course provided by NCCAOM or an equivalent course approved by the Board”	to ensure any CNT courses	No; clean needle technique courses to be approved must follow that reference manual
R4-8-303	object to enactment	these rules prohibit apprenticeships or preceptorship training	additional rule packet will be developed to address apprenticeships and preceptorship; these rules do not preclude
R4-8-303 (A)(1)	after “ACAOM” add “or other certified body”	to allow accrediting bodies other than NCCAOM	under advisement in the future because ACAOM is presently only accrediting body
R4-8-303(B)(1)	after “ACAOM” add “or other accreditation body”	to allow accrediting bodies other than NCCAOM	under advisement in the future because ACAOM is presently only accrediting body
R4-8-304	object to enactment	these rules prohibit apprenticeships or preceptorship training	The rule does not prohibit apprenticeships or preceptorship training. Board is developing a separate rule package to address this.
R4-8-304(B)(2)		define which western diagnostic procedures; does this create liability if tests are not ordered? How determine if acupuncturist is qualified to order tests.	the rule provides for approval of a program that provides direct patient contact in various subjects, including application of Eastern and Western diagnostic procedures. To specify the procedures or only include Eastern diagnostic procedures that must be studied is too limiting for program approval.
R4-8-304(B)(2)	delete “and Western”	acupuncture diagnostic procedures are totally different from Western; adding Western confuses students and impedes them learning Eastern diagnostics	the rule provides for approval of a program that provides direct patient contact in various subjects, including application of Eastern and Western diagnostic procedures. To specify the procedures or only include Eastern diagnostic procedures that must be studied is too limiting for program approval.
R4-8-304(C)	after existing language, add “or an acupuncture program shall comply with the requirements and attendant criteria in other accreditation body”	leaves options open for accrediting agencies other than NCCAOM	under advisement in the future because ACAOM is presently only accrediting body
R4-8-307(B)		AAG Nancy Beck said illegal to charge investigated party for investigations; costs could drive school out of business or into bankruptcy even if no substance to complaints	May be a misunderstanding of Ms. Beck’s observation that charging for investigation is not authorized by Acupuncture statutes. This is not a charge for an investigation. It is reimbursement of expenses. See A.R.S. § 32-3927(B)
R4-8-307(D)	delete “substantial changes to the facility, clinic, or curriculum” and add “failure to comply with R4-8-303 or R4-304.”	define “substantial”	adopted standard that requires 30 day notification only of failures to maintain compliance with approval standards in rules

*Arizona Administrative Register*

**Notices of Final Rulemaking**

R4-8-308	change CE requirement to 6 hours; only topics of interest to acudetox	to be more specific to acudetox practitioners.  let current CE requirements for certified substance abuse counselors satisfy Board's CE  "allow CE to include training in substance abuse, HIV/ AIDS and related areas"	A.R.S. § 32-3925(B) speaks only to licensees; therefore auricular certificate holders are not required to complete any continuing education hours
R4-8-308	"change language to allow national or international courses for individual, independent or home-style study using distance learning"		"yes, we did it by deleting B, and substituting the automatic approval "
R4-8-308 - 310		Board may have operational problems meeting this demand	adopt new language R4-8-308(B) granting automatic approval in Arizona for continuing education already accredited.
R4-8-308(A)(1) & (2)	change "acupuncture" to read "acupuncture and oriental medicine."	continues to push the envelope for future inclusion of oriental medicine in the law	not within statutory authority
R4-8-308(A)(3)(e)	delete "e" paragraph	define "other aspects of the course"	"agree, non-value added"
R4-8-308(B)	deleted (B) paragraph; (re-letter to get rid of "A"?)	"NCCAOM accepts home study, individual study & distance learning, why not AZ?"	"deleted R4-8-308(B), so both are now allowed"
R4-8-308(B)	"change to automatically approve courses approved by NCCAOM, other international, national or state professional associations."	no reason to force everyone to get prior approval for courses already approved; take workload off Board	adopt
R4-8-309	change "10" days to "30" days	"People are tremendously busy these days, and 10 days is a very short deadline"	deleted (A)(6)
R4-8-309(A)(6)	delete Section	"redundant to info in 1-5; added work for practitioner and Board, no added benefit"	deleted (A)(6)
R4-8-310(A) & (B)	Substitute "withdraw" for "revoke" throughout; insert "the following" between "for" and "causes" Delete phrase "that include, but are not limited to" In (A)(1), substitute "or" for "and" at end of phrase	Causes/limits must be specified	adopted change to language; substituted "withdraw" for "revoke" as more appropriate word choice

**Notices of Final Rulemaking**

R4-8-401(2)	after “physically present” insert “in the clinic”	“unbroken line of sight” makes it impossible to fulfill supervisory obligations in a clinic with separate treatment rooms  “no way supervisor can be physically present at student’s side at all times; is a physical and financial impossibility to sit in with every student at all times, or entire diagnosis and treatment. Is arbitrary and capricious rule”	adopted change
R4-8-401(3)	delete	don’t need if change #2	agreed
R4-8-403		once a month supervision of licensed acupuncturist	adopted language R4-8-403
R4-8-403		supervision be general; licensed acupuncturist available by phone; monthly onsite to ensure OSHA compliance	adopted language R4-8-403
R4-8-403	change to allow onsite supervision to be 1-2 hours per month	supervision not consistent with detox programs	Adopted language to set supervision standard; See R4-8-403
R4-8-403	add requirement that supervising acupuncturist have received training in substance abuse disorder	better meet specific needs of acudetox	not within statutory authority
R4-8-505	“person submitting the application” to “petitioner”	“Seems the Board would be interested in info on petitioner, not person submitting petition”	no change; petitioner means person submitting petition.

**12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**

None

**13. Incorporations by reference and their location in the rules:**

“NADA Registered Trainer Resource Manual”, 1999, published by the National Acupuncture Detoxification Association, 3220 N Street NW #275, Washington, D.C. 20007, at R4-8-301(A).

“Clean Needle Technique Manual for Acupuncturists”, 4th Edition, 1997, published by the National Acupuncture Foundation, 1718 M. Street, Suite 195, Washington, D.C. 20036, at R4-8-302(A).

“Accreditation Handbook”, January 1998 Update, pages 9 through 41, published by the Accreditation Commission for Acupuncture and Oriental Medicine, 1010 Wayne Avenue, Suite 1270, Silver Spring, MD 20910, at R4-8-304(C).

**14. Was this rule previously adopted as an emergency rule?**

No

**15. The full text of the rules follows:**

**TITLE 4. PROFESSIONS AND OCCUPATIONS**

**CHAPTER 8. ACUPUNCTURE BOARD OF EXAMINERS**

**ARTICLE 1. GENERAL PROVISIONS**

Section

- R4-8-101. Definitions
- R4-8-102. Certification of Documentation; Translation; Verification
- R4-8-103. Filing of Address and Telephone Number
- R4-8-104. Board Meetings
- R4-8-105. Timeframes for Licensure, Certification, and Approvals
- Table 1. Timeframes (in days)
- R4-8-106. Completion of Applications; Nonrefundable Fees

**ARTICLE 2. LICENSING AND CERTIFICATION PROVISIONS**

Section

- R4-8-201. Application for Auricular Acupuncture Certificate
- R4-8-202. Approval of Substance Abuse and Chemical Dependency Programs for the Practice of Auricular Acupuncture
- R4-8-203. Application for Acupuncture License
- R4-8-204. Renewal of Licenses and Certificates
- R4-8-205. Continuing Education Requirement
- R4-8-206. Reinstatement of License
- R4-8-207. Exemption from Continuing Education
- R4-8-208. Application for Visiting Professor Certificate
- R4-8-209. Application for Grandfathered Rights
- R4-8-210. Minimum Competency Test for Grandfathered Rights

**ARTICLE 3. TRAINING PROGRAMS AND CONTINUING EDUCATION**

- R4-8-301. Auricular Acupuncture Training Program Approval
- R4-8-302. Clean Needle Technique Course Approval
- R4-8-303. Approval of Program of Acupuncture; Clinical Training
- R4-8-304. Program of Acupuncture Standards
- R4-8-305. Documentation Required for Approval
- R4-8-306. Denial or Revocation of Approval
- R4-8-307. Acupuncture Program Monitoring; Records; Reporting
- R4-8-308. Approval of Continuing Education Course
- R4-8-309. Application for Continuing Education Course Approval
- R4-8-310. Denial or Revocation of Continuing Education Course Approval

**ARTICLE 4. REGULATORY PROVISIONS**

Section

- R4-8-401. Treatment of Patients by Acupuncture Students; Supervision
- R4-8-402. Record Keeping
- R4-8-403. Supervision of Auricular Acupuncturists

**ARTICLE 5. PUBLIC PARTICIPATION PROCEDURES**

Section

- R4-8-501. Agency Record; Directory of Substantive Policy Statements
- R4-8-502. Petition for Rulemaking; Review of Agency Practice or Substantive Policy Statement; Objection to Rule Based Upon Economic, Small Business or Consumer Impact
- R4-8-503. Public Comments
- R4-8-504. Oral Proceedings
- R4-8-505. Petition for Delayed Effective Date
- R4-8-506. Written Criticism of Rule

**ARTICLE 1. GENERAL PROVISIONS**

**R4-8-101. Definitions**

For purposes of this Chapter:

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

1. “ACAOM” means the Accreditation Commission for Acupuncture and Oriental Medicine.
2. “Acupuncturist” means a person licensed or certified by the Board to practice acupuncture in the State of Arizona.
3. “Administrative completeness review” means the Board’s process for determining that a person has provided all of the information and documents required by this Chapter for an application.
4. “Applicant” means a person requesting a certificate or license from the Board.
5. “Application packet” means the fees, forms, documents, and additional information the Board requires to be submitted by an applicant or on an applicant’s behalf.
6. “Clean needle technique” means a manner of needle sterilization and use that avoids the spread of disease and infection, protects the public and the patient, and complies with state and federal law, regulation, and rule.
7. “Course” means a systematic learning experience, at least 1 hour in length, that assists a participant to acquire knowledge, skills, and information relevant to the practice of acupuncture.
8. “Day” means calendar day.
9. “Hour” means at least 50 minutes of course participation.
10. “NADA” means the National Acupuncture Detoxification Association.
11. “NCCAOM” means the National Commission for the Certification of Acupuncture and Oriental Medicine.
12. “Successful completion of a clean needle technique course” means a course participant has:
  - a. Attended the course, and
  - b. Received a passing score on an examination or other confirmation from the course provider that evidences that the participant mastered the course content.
13. “Supervisor” means an acupuncturist licensed by the Board who is responsible for the oversight and direction of an acupuncture student.

**R4-8-102. Certification of Documentation; Translation; Verification**

- A.** An applicant shall ensure that a document submitted to the Board from the applicant or any program has an official or government seal or written verification authenticating the document. The Board in its discretion may waive this requirement if the Board determines that an applicant cannot obtain the seal or verification through the exercise of due diligence.
- B.** An applicant shall ensure that official copies of diplomas, transcripts, licenses or certificates, examination scores, and other documents required for application are forwarded directly to the Board by the issuing entity.
- C.** An applicant shall ensure that a document submitted in a language other than English is accompanied by an original English translation, performed by a qualified translator. The translation must be accompanied by an Affidavit of Accuracy in which the translator who performed or verified the translation affirms that the entire document has been translated, that nothing has been omitted or added, and that the translation is true and correct. An original translation will be returned to the applicant only if a photocopy of the entire translation, including the Affidavit of Accuracy, is provided. The Board shall not accept a translation by the applicant.
- D.** The following persons are regarded as qualified translators:
  1. An officer or employee of an official translation bureau or governmental agency.
  2. A professor or instructor who teaches the translated language in an accredited college or university in the United States. The Affidavit of Accuracy shall include the name of the course taught, be on the official letterhead of the school, and be notarized.
  3. An American consul in the country where the translated document was issued. If a private translator translated the document, the American consul shall verify both the contents of the translation and the identity of the translator.
  4. A consul general or diplomatic representative accredited in the United States, or other representative of a foreign government agency. The representative shall verify the contents of a translation performed by a private individual.
- E.** All written verifications of statements or documents submitted by or on behalf of an applicant shall be under oath and made under penalty of perjury.

**R4-8-103. Filing of Address and Telephone Number**

A person holding a license or certificate or any other authority issued under this Chapter shall file the person’s current mailing address, residential telephone number, and business telephone number with the Board, and shall notify the Board, in writing, within 20 days of any change of mailing address (giving both the old and the new address), or residential or business telephone numbers.

**R4-8-104. Board Meetings**

- A.** The Board shall conduct its annual meeting in January.
- B.** The Board shall provide public notice of the date, time, and place of its annual meeting at least 20 days before the meeting.

**R4-8-105. Timeframes for Licensure, Certification, and Approval**

- A.** The overall timeframe described in A.R.S. § 41-1072(2) for each type of license, certificate, and approval granted by the Board is listed in Table 1. An applicant and the Executive Director of the Board may agree in writing to extend the overall

*Arizona Administrative Register*

**Notices of Final Rulemaking**

timeframe. The overall timeframe and the substantive timeframe may not be extended by more than 25% of the overall timeframe.

**B.** The administrative completeness review timeframe begins:

1. For approval or denial of an acupuncture license by grandfathered rights, when the Board receives an application packet;
2. For approval or denial of an application for licensure or other certification, when the Board receives an application packet; and
3. For approval or denial of an application for approval of a training program, clean needle course, or continuing education course, when the Board receives a request for approval.

**C.** If a timeframe's last day falls on a Saturday, Sunday or official state holiday, the next business day is the timeframe's last day.

**Table 1. Timeframes (in days)**

<u>Type of Applicant</u>	<u>Type of Approval</u>	<u>Statutory Authority</u>	<u>Overall Timeframe</u>	<u>Administrative Completeness Timeframe</u>	<u>Substantive Review Timeframe</u>
<u>Acupuncture License by Grandfathered Rights</u>	<u>Approval for Licensure</u>	<u>Laws 1998, Ch. 239, § 3</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Acupuncture License</u>	<u>Approval for Licensure</u>	<u>A.R.S. § 32-3924</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Visiting Professor Certificate</u>	<u>Approval for Certification</u>	<u>A.R.S. § 32-3926</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Auricular Acupuncture Certificate</u>	<u>Approval for Certification</u>	<u>A.R.S. § 32-3922</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Auricular Acupuncture Training Program</u>	<u>Approval of training program</u>	<u>A.R.S. § 32-3922</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Program of Acupuncture</u>	<u>Approval of training program</u>	<u>A.R.S. § 32-3924(2)</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Clinical Training Program</u>	<u>Approval of training program</u>	<u>A.R.S. § 32-3924(2)</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Clean Needle Technique Course</u>	<u>Approval of course</u>	<u>A.R.S. § 32-3924</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>Continuing education program</u>	<u>Approval for Continuing Education</u>	<u>A.R.S. § 32-3925</u>	<u>90</u>	<u>40</u>	<u>50</u>
<u>Exemption from continuing education</u>	<u>Approval of exemption</u>	<u>A.R.S. § 32-3925</u>	<u>30</u>	<u>10</u>	<u>20</u>
<u>License or certificate renewal</u>	<u>Approval of renewal</u>	<u>A.R.S. § 32-3925</u>	<u>60</u>	<u>20</u>	<u>40</u>
<u>License or certificate reinstatement</u>	<u>Approval of reinstatement of license</u>	<u>A.R.S. § 32-3925(D)</u>	<u>60</u>	<u>20</u>	<u>40</u>

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**R4-8-106. Completion of Applications; Nonrefundable Fees**

- A.** An application is administratively complete when the Board receives all documents required for licensure or certification.
- B.** Application fees are nonrefundable except as required by A.R.S. § 41-1077.

**ARTICLE 2. LICENSING AND CERTIFICATION PROVISIONS**

**R4-8-201. Application for Auricular Acupuncture Certificate**

To be certified as an auricular acupuncturist to provide auricular acupuncture services in alcoholism, substance abuse, and chemical dependency programs, an applicant shall submit an application packet to the Board that includes:

1. An application, on a form provided by the Board, that provides the following information about the applicant:
  - a. Name, date of birth, and social security number;
  - b. Home and business addresses and telephone numbers;
  - c. Whether the applicant has ever been permitted by law to practice acupuncture in another state, territory, or district of the United States, or any other country or subdivision of any country, and if so, a list of the jurisdictions in which the applicant has been permitted by law to practice acupuncture, license numbers, issuance dates, expiration dates, license limitations, current status, and whether the licenses were granted by endorsement, examination, or another means;
  - d. Whether the applicant has ever had a licensing authority of any other state, district, or territory of the United States, or any other country or subdivision of any country, deny the applicant a license or certificate to practice acupuncture, or revoke, suspend, limit, restrict, or take any other action regarding the applicant's license or certificate to practice acupuncture, and if so, an explanation;
  - e. Whether the applicant has ever been convicted of a crime, including driving under the influence of drugs or alcohol, other than a minor traffic offense, and if so, an explanation;
  - f. Whether the applicant has ever had a claim for malpractice or a lawsuit filed against the applicant alleging professional malpractice or negligence in the practice of acupuncture, and if so, an explanation;
  - g. Whether the applicant has any condition that may impair the applicant's ability to practice acupuncture safely and skillfully;
  - h. Whether the applicant has ever resigned, voluntarily or involuntarily, from a health-care facility while under investigation or had a health-care facility terminate, restrict, or take any other action regarding the applicant's employment, professional training, or privileges; and
  - i. A signed verification that the facts in the application are accurate, true, and complete;
2. The application and initial licensing fees prescribed by the Board. If the Board denies licensure, the initial licensing fee shall be refunded; and
3. Documentation of successfully completing a Board-approved training program in auricular acupuncture for the treatment of alcoholism, substance abuse, or chemical dependency and a board-approved clean needle technique course.

**R4-8-202. Approval of Substance Abuse and Chemical Dependency Programs for the Practice of Auricular Acupuncture**

- A.** An auricular acupuncture certificate holder shall provide acupuncture services only in alcoholism, substance abuse, and chemical dependency programs approved by the Board, the State of Arizona, or the federal government, and only under the supervision of a person licensed to practice acupuncture in Arizona.
- B.** For purposes of this Section, the Board approves an alcoholism, substance abuse, and chemical dependency program that provides services and is licensed by the Arizona Department of Health Services as a behavioral health agency under A.R.S. Title 36, Chapter 4.

**R4-8-203. Application for Acupuncture License**

To be licensed to practice acupuncture, an applicant shall submit an application packet to the Board that includes:

1. An application, on a form provided by the Board, that provides the following information about the applicant:
  - a. Name, date of birth, and social security number;
  - b. Home and business addresses and telephone numbers;
  - c. Whether the applicant has ever been permitted by law to practice acupuncture in another state, territory, or district of the United States, or any other country or subdivision of a country, and if so, a list of the jurisdictions in which the applicant has been permitted by law to practice acupuncture, license numbers, issuance dates, expiration dates, license limitations, current status, and whether the licenses were granted by endorsement, examination, or another means;
  - d. Whether the applicant is certified by the NCCAOM, and if so, whether the certification is active and current, and the dates of issuance and expiration;
  - e. Whether the applicant is certified by another certifying body, and if so, the name and address of the certifying body, and the dates of issuance and expiration of the certification;
  - f. Whether the applicant has passed a certifying or licensing examination in acupuncture, and if so, the name and address of the organization administering the examination;

Notices of Final Rulemaking

- g. Whether the applicant has completed an acupuncture program accredited within the United States, or any other country or subdivision of any country, and if so, the date of completion of the program;
  - h. Whether the applicant has completed a minimum of 1850 hours of training in acupuncture that includes at least 800 hours of clinical training, and if so, the names and addresses of the schools attended, dates of attendance, and the diploma or degree obtained;
  - i. Whether the applicant has ever had a licensing authority of any other state, district, or territory of the United States or any other country or subdivision of any country, deny the applicant a license or certificate to practice acupuncture, or revoke, suspend, limit, restrict, or take any other action regarding the applicant's license or certificate to practice acupuncture, and if so, an explanation;
  - j. Whether the applicant has ever been convicted of a crime, including driving under the influence of drugs or alcohol, other than a minor traffic offense, and if so, an explanation;
  - k. Whether the applicant has ever had a claim for malpractice or a lawsuit filed against the applicant alleging professional malpractice or negligence in the practice of acupuncture, and if so, an explanation;
  - l. Whether the applicant has any condition that may impair the applicant's ability to practice acupuncture safely and skillfully;
  - m. Whether the applicant has ever resigned, voluntarily or involuntarily, from a health-care facility while under investigation or had a health-care facility terminate, restrict, or take any other action regarding the applicant's employment, professional training, or privileges; and
  - n. A signed verification that the facts in the application are accurate, true, and complete;
2. One of the following:
- a. Transcript that shows evidence of graduation from or completed training from an approved acupuncture program and includes a list of the courses studied and clinical training received, grades or scores for each course and clinical training, and the name and address of the approved program;
  - b. Documentation of certification from the NCCAOM, its successor, or another certifying body recognized by the Board; or
  - c. Documentation that the applicant has been permitted by law to practice acupuncture in another state, district, or territory of the United States, or another country or subdivision of a country with standards substantially similar to those in this Chapter and that the applicant's license has not been revoked;
3. Documentation of successfully completing a clean needle technique course approved by the Board;
4. A photograph of the applicant no larger than 2 x 2 inches taken during the preceding 12 months; and
5. The application and initial licensing fees prescribed by the Board. If the Board denies licensure, the initial licensing fee shall be refunded.

**R4-8-204. Renewal of Licenses and Certificates**

- A.** All licenses and certificates expire 12 months from the date issued.
- B.** A license or certificate holder shall submit renewal fees with a renewal application form, provided and mailed to the license or certificate holder by the Board, that furnishes up-to-date information concerning current practice status, location of practice, correct home and business mailing addresses, and telephone numbers on or before the date the license or certificate expires.
- C.** To renew a license, a license holder shall submit an affidavit of continuing education attendance that meets the requirements of R4-8-205.
- D.** A license or certificate holder who fails to renew on or before the date the license or certificate expires shall immediately cease and desist from engaging further in any practice under these rules and A.R.S. Title 32, Chapter 39 until the license or certificate is renewed.

**R4-8-205. Continuing Education Requirement**

- A.** A license holder shall complete a minimum of 15 hours of Board-approved continuing education per year.
- B.** With an application for license renewal, an acupuncturist shall submit a signed statement under penalty of perjury that indicates whether the acupuncturist has complied with the continuing education requirement.
- C.** The Board, at its discretion, may audit a random sample of acupuncturists who report compliance with the continuing education requirement.
- D.** An acupuncturist selected for audit shall submit documentation or records of continuing education course work completed.
- E.** An acupuncturist shall retain for a minimum of 2 years records of all continuing education courses or programs completed which indicate the provider's name, title of the course or program, date and location of the course or program, and number of continuing education credits awarded.
- F.** Instructors of approved continuing education courses may receive 1 hour of continuing education credit for each classroom hour taught, up to a maximum of 2 hours of continuing education credit per year. Participation as a member of a panel presentation for an approved course does not entitle the participant to earn continuing education credit as an instructor.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**G.** An acupuncturist may use up to 4 hours of continuing education in acupuncture practice management or medical ethics per year to meet the continuing education requirement.

**H.** A licensed acupuncturist may receive 10 hours of continuing education for each Article written on the practice of acupuncture or oriental medicine that is published in a peer-reviewed professional journal during the year for which the hours apply.

**R4-8-206. Reinstatement of License**

**A.** To reinstate an expired license, the former license holder shall submit the required renewal application, renewal fee, any applicable late fees, and affidavit of continuing education attendance within 12 months from the date of expiration.

**B.** If a license is expired for more than 12 months, the former license holder may reapply for licensure only by complying with this Article.

**R4-8-207. Exemption from Continuing Education**

**A.** A licensed acupuncturist may submit to the Board a written request to be exempt from the annual continuing education requirement for any of the following reasons:

1. Catastrophic illness or other serious disability; or
2. Military service outside the United States longer than 6 months in duration.

**B.** Exemption requests shall be submitted at least 30 days before the expiration of the license.

**C.** If granted by the Board, an exemption is for the 1 renewal period only. An exemption may be applied for annually, if necessary.

**D.** A denial of exemption may be appealed in accordance with A.R.S. Title 41, Chapter 6, Article 10.

**R4-8-208. Application for Visiting Professor Certificate**

**A.** To be approved by the Board, an applicant for a visiting professor certificate shall submit to the Board:

1. An application on a form provided by the Board that includes the information required in R4-8-201(1) and a signed verification that the facts in the application are accurate, true, and complete;
2. The required fees;
3. Written documentation of at least 5 years of experience in the practice of acupuncture; and
4. Evidence of skill and training in the subject that the applicant will be teaching, including 1 of the following:
  - a. Written documentation from a college or university of experience, education, or other training in the subject the applicant will be teaching;
  - b. Written documentation of experience in teaching the same or similar subject matter content within the 2 years preceding the application; or
  - c. Written documentation of 1 year's experience within the last 2 years in the specialized area in which the applicant is teaching.
5. A detailed plan outlining the duties of the visiting professor.

**B.** The Board shall issue a visiting professor certificate to an applicant who complies with the requirements of this Section. An applicant who is denied a visiting professor certificate may request a hearing in accordance with A.R.S. Title 41, Chapter 6, Article 10.

**R4-8-209. Application for Grandfathered Rights**

**A.** An applicant for licensure by grandfathered rights shall submit an application packet to the Board on or before December 31, 2000 that includes:

1. An application on a form provided by the Board that provides the following information about the applicant:
  - a. Name, date of birth, social security number, and home and business addresses and telephone numbers;
  - b. A photograph of the applicant no larger than 2 x 2 inches and taken during the preceding 12 months;
  - c. Whether the applicant has current active status as a diplomate of acupuncture from the NCCAOM, and if so, the dates of issuance and expiration;
  - d. Whether the applicant passed the NCCAOM examination, and if so, the date the examination was taken;
  - e. Whether the applicant passed an acupuncture examination other than the NCCAOM, and if so, the date of examination and name and address of the organization that administered the examination;
  - f. Whether the applicant has been permitted by law to practice acupuncture in another state, and if so, a list of the states and whether each license is active or inactive;
  - g. Whether the applicant has at least 1000 hours of combined training and experience in acupuncture or oriental medicine;
  - h. Whether the applicant has ever had a licensing authority of any other state, district, or territory of the United States or any other country or subdivision of any country, deny the applicant a license or certificate to practice acupuncture, or revoke, suspend, limit, restrict, or take any other action regarding the applicant's license or certificate to practice acupuncture, and if so, an explanation;
  - i. Whether the applicant has ever been convicted of a crime, including driving under the influence of drugs or alcohol, other than a minor traffic offense, and if so, an explanation;

- j. Whether the applicant has ever had a claim for malpractice or a lawsuit filed against the applicant alleging professional malpractice or negligence in the practice of acupuncture, and if so, an explanation;
- k. Whether the applicant has any condition that may impair the applicant's ability to practice acupuncture safely and skillfully;
- l. Whether the applicant has ever resigned, voluntarily or involuntarily, from a health-care facility while under investigation or had a health-care facility terminate, restrict, or take any other action regarding the applicant's employment, professional training, or privileges; and
- m. A signed verification that the facts in the application are accurate, true, and complete;
- 2. The application and initial licensing fees prescribed by the Board. If the Board denies the application, the initial licensing fee shall be refunded;
- 3. Proof of residency in the state of Arizona on May 29, 1998;
- 4. Evidence of having passed a minimum competency test, as described in R4-8-210, in contraindications, sanitary techniques, and complications; and
- 5. Documents that prove that the applicant has:
  - a. Current, active status as a diplomate of acupuncture from the NCCAOM, or
  - b. Current, active acupuncture licensure from another state; or
  - c. Complies with subsection (B).
- B.** An applicant applying for licensure by grandfathered rights who neither is a diplomate of acupuncture nor holds an acupuncture license from another state shall provide to the Board:
  - 1. Documentation of the hours of experience and training in the practice of acupuncture, including specific dates and actual hours of practice provided, the name and address of each place of practice and program attended, and a description of the experience and training;
  - 2. A statement signed by the applicant attesting to the applicant's having completed at least 1000 hours of combined training and experience;
  - 3. A certified opinion from a certified public accountant stating that the applicant's records show at least 2 years of practice in acupuncture out of the past five years; and
  - 4. A letter of recommendation, dated within 30 days of filing an application for licensure, signed by an acupuncturist permitted by law to practice in the United States or its districts or territories, attesting to the applicant's ability, qualifications, skills in sanitary techniques, and fitness to practice acupuncture.
- C.** The Board shall grant a license to an applicant who meets the requirements of this Section.
- D.** The Board shall deny licensure to an applicant for licensure by grandfathered rights who fails to meet the requirements of this Section. The applicant may appeal the denial of licensure in accordance with A.R.S. Title 41, Chapter 6, Article 10.
- E.** This Section is repealed on January 31, 2001.

**R4-8-210. Minimum Competency Test for Grandfathered Rights**

- A.** The minimum competency test for grandfathered rights is a written test.
  - 1. The test measures the applicant's minimum competency in contraindications, sanitary techniques, and complications.
  - 2. To pass the test, an applicant shall obtain a scaled score of 75.
- B.** Tests of applicants applying for licensure by grandfathered rights shall be held at a time, place, and date to be provided in writing to all applicants who have applications for licensure on file with the Board and pay their fees not less than 30 days before the test. An applicant may take the test as many times as it is offered before the December 31, 2000 deadline for filing a complete application for licensure by grandfathered rights.
- C.** An applicant who fails the minimum competency test may appeal the failing score in accordance with A.R.S. Title 41, Chapter 6, Article 10.
- D.** This Section is repealed on January 31, 2001.

**ARTICLE 3. TRAINING PROGRAMS AND CONTINUING EDUCATION**

**R4-8-301. Auricular Acupuncture Training Program Approval**

- A.** To receive Board approval, a training program in acupuncture for the treatment of alcoholism, substance abuse, or chemical dependency shall submit to the Board evidence that:
  - 1. The program is conducted in accordance with the "NADA Registered Trainer Resource Manual", 1999, published by the National Acupuncture Detoxification Association, 3220 N Street NW #275, Washington, D.C. 20007, which is incorporated by reference and on file with the Board and the Secretary of State. This incorporation includes no later edition or amendment; and
  - 2. The program is approved by the NADA, another board-approved national certifying entity for acupuncture, or another state.
- B.** A program that is denied approval may appeal by requesting a hearing under A.R.S. Title 41, Chapter 6, Article 10.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**R4-8-302. Clean Needle Technique Course Approval**

- A.** To be approved by the Board, a person who proposes to conduct a clean needle technique course shall submit to the Board evidence that the course is conducted in accordance with “Clean Needle Technique Manual for Acupuncturists”, 4th Edition, 1997, published by the National Acupuncture Foundation, 1718 M. Street, Suite 195, Washington, D.C. 20036, which is incorporated by reference and on file with the Board and the Secretary of State. This incorporation includes no later edition or amendment.
- B.** A course that is denied approval may appeal by requesting a hearing under A.R.S. Title 41, Chapter 6, Article 10.

**R4-8-303. Approval of Program of Acupuncture; Clinical Training**

- A.** To obtain approval from the Board, an acupuncture program shall either:
1. Submit documentation that the acupuncture program is a candidate for accreditation or has accreditation through the ACAOM and provides a minimum of 1850 hours of training, including not less than 800 hours of clinical training; or
  2. Submit documentation of compliance with R4-8-304.
- B.** To obtain approval from the Board, an acupuncture clinical training program shall either:
1. Submit documentation that the clinical training program is part of an acupuncture program that is a candidate for accreditation or has accreditation through the ACAOM, or is itself a candidate for accreditation or has accreditation through ACAOM; or
  2. Submit documentation of compliance with R4-8-304(B).

**R4-8-304. Program of Acupuncture Standards**

- A.** The Board shall approve a program of acupuncture that does not meet the standard at R4-8-303(A)(1) only if the program is for a minimum of 3 years and provides the following course content and hours:
1. 690 hours in Oriental medical theory, diagnosis, and treatment techniques in acupuncture and related studies;
  2. 800 hours in clinical training; and
  3. 360 hours in biomedical clinical sciences.
- B.** The Board shall approve an acupuncture clinical training program that does not meet the standard of R4-8-303(B)(1) only if the clinical training program owns and operates an acupuncture clinic, provides at least 75% of clinical instruction in its clinic, and provides direct patient contact in the following:
1. Supervised observation of the clinical practice of acupuncture with case presentations and discussions;
  2. Application of Eastern and Western diagnostic procedures in evaluating patients; and
  3. Clinical treatment of a patient with acupuncture.
- C.** To be approved by the Board, an acupuncture program shall comply with the 14 Essential Requirements and their attendant criteria in the “Accreditation Handbook”, January 1998 Update, pages 9 through 41, published by the Accreditation Commission for Acupuncture and Oriental Medicine, 1010 Wayne Avenue, Suite 1270, Silver Spring, MD 20910, which is incorporated by reference and on file with the Board and the Secretary of State. This incorporation includes no later edition or amendment.

**R4-8-305. Documentation Required for Approval**

An acupuncture program or clinical training program seeking approval by the Board shall provide the Board with documents and other evidence requested by the Board to determine the nature and extent of the training offered, including catalogues, course description, curricula plans, and study bulletins.

**R4-8-306. Denial or Revocation of Approval**

- A.** The Board may deny approval to or revoke the approval of any acupuncture program or clinical training program for its failure to comply with the rules in this Chapter or A.R.S. Title 32, Chapter 39.
- B.** An acupuncture program or clinical training program that has approval denied may request a hearing in accordance with A.R.S. Title 41, Chapter 6, Article 10.
- C.** The Board shall conduct a hearing in accordance with A.R.S. Title 41, Chapter 6, Article 10, before revoking an acupuncture program or clinical training program approval.

**R4-8-307. Acupuncture Program Monitoring; Records; Reporting**

- A.** Every approved acupuncture program shall submit to the Board, within 60 days after the close of the program’s fiscal year, a letter attesting that the program continues to meet the standards of R4-8-303 and R4-8-304, and a course catalog that includes:
1. Course descriptions of the next years’ proposed curriculum;
  2. The program faculty, administration, or governing body; and
  3. A description of the program facility.
- B.** Representatives of the Board may conduct an onsite visit of an approved program to review and evaluate the status of the program. The approved program shall reimburse the Board for direct costs incurred in conducting this review and evaluation.
- C.** All student records shall be maintained in English.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**D.** Each approved program of acupuncture shall, within 30 days, report to the Board any failure to comply with R4-8-303 and R4-8-304.

**R4-8-308. Approval of Continuing Education Course**

**A.** To be approved by the Board, a continuing education course shall:

1. Be related to the knowledge or technical skills required to practice acupuncture; or
2. Be related to direct or indirect acupuncture patient care, including practice management or medical ethics; and
3. Include a method by which the course participants evaluate:
  - a. The extent to which the course met its stated objectives.
  - b. The adequacy of the instructor's knowledge of the course subject.
  - c. The use of appropriate teaching methods, and
  - d. The applicability or usefulness of the course information.

**B.** The Board shall approve for continuing education credit, without application, any course approved by a board of acupuncture licensing in another state, any course provided by the Continuing Education Council of NCCAOM or the National Alliance for Acupuncture and Oriental Medicine, and any course provided by a board-approved acupuncture training program.

**R4-8-309. Application for Continuing Education Course Approval**

**A.** To obtain approval for a continuing education course, a course provider shall submit to the Board a request for course approval, in English, on a form provided by the Board, which includes the following information:

1. The provider's name, provider's identification number, address, telephone number, and contact person;
2. Course title, date, location, and number of continuing education hours;
3. Method of instruction;
4. Educational objectives to be met and course outline; and
5. Instructor information and qualifications.

**B.** A provider shall obtain Board approval for every course that is offered for continuing education credit. If a previously approved course is repeated, the provider shall apply to the Board for approval of each subsequent administration of the course.

**C.** A provider shall submit a request for course approval to the Board at least 90 days before the course is offered.

**R4-8-310. Denial or Revocation of Continuing Education Course Approval**

**A.** The Board may withdraw its approval of a continuing education course or deny approval for a continuing education course for causes that include, but are not limited to:

1. Failure to comply with any provision of these rules; and
2. Any material misrepresentation of fact by a provider.

**B.** The Board may withdraw its approval of a course following a hearing conducted in accordance with A.R.S. Title 41, Chapter 6, Article 10.

**C.** A provider may appeal the denial of approval of a course by filing a written request for hearing in accordance with A.R.S. Title 41, Chapter 6, Article 10.

**ARTICLE 4. REGULATORY PROVISIONS**

**R4-8-401. Treatment of Patients by Acupuncture Students; Supervision**

For an acupuncture student to treat a patient, the student and the student's supervisor shall comply with the following:

1. Obtain written evidence of informed consent in writing from the patient before treatment by an acupuncture student, indicating that the patient knows a student will be treating the patient;
2. Have a supervisor physically present in the clinic during any treatment of the patient performed by an acupuncture student;
3. Consult each other before and after each treatment; and
4. Maintain records for each patient treated in accordance with R4-8-402.

**R4-8-402. Record Keeping**

An acupuncturist shall maintain legible and accurate records on each patient who is given acupuncture treatment, including the name of the patient, dates of treatment, history, treatment given, and progress made during acupuncture treatments.

**R4-8-403. Supervision of Auricular Acupuncturists**

A licensed acupuncturist supervising an auricular acupuncture certificate holder shall be promptly available in person, by phone, or electronically during normal working hours, and shall meet onsite with certificate holders at least once a month to assess compliance with these laws and rules.

**ARTICLE 5. PUBLIC PARTICIPATION PROCEDURES**

**R4-8-501. Agency Record; Directory of Substantive Policy Statements**

The Board's official rulemaking record and directory of substantive policy statements is located in the Board's office and may be reviewed any week day, 8:00 a.m. until 5:00 p.m., except state holidays.

**R4-8-502. Petition for Rulemaking; Review of Agency Practice or Substantive Policy Statement; Objection to Rule Based Upon Economic, Small Business, or Consumer Impact**

A petition to adopt, amend, or repeal a rule or to review an existing agency practice or substantive policy statement that a petitioner alleges to constitute a rule under A.R.S. § 41-1033 or to object to a rule in accordance with A.R.S. § 41-1056.01 shall be filed with the Board as prescribed in this Section. Each petition shall contain:

1. The name and current address of the petitioner;
2. For the adoption of a new rule, the specific language of the proposed rule;
3. For the amendment of a current rule, the citation for the applicable Arizona Administrative Code number and rule title. The petition shall include the specific language of the current rule with any language to be deleted stricken through but legible, and any new language underlined;
4. For the repeal of a current rule, the citation for the applicable A.A.C. number and title of the rule proposed for repeal;
5. The reason a rule should be adopted, amended, or repealed, and if in reference to an existing rule, why the rule is inadequate, unreasonable, unduly burdensome, or otherwise not acceptable. The petitioner may provide additional supporting information, including:
  - a. Any statistical data or other justification, with clear reference to an attached exhibit;
  - b. An identification of what persons or segment of the public would be affected and how they would be affected; and
  - c. If the petitioner is a public agency, a summary of relevant issues raised in any public hearing, or as written comments offered by the public;
6. For a review of an existing Board practice or substantive policy statement alleged to constitute a rule, the reason the existing Board practice or substantive policy statement is believed to constitute a rule and the proposed action requested of the Board.
7. For an objection to a rule based upon the economic, small business, or consumer impact, evidence that:
  - a. The actual economic, small business, or consumer impact significantly exceeded the impact estimated in the economic, small business, and consumer impact statement submitted during the making of the rule; or
  - b. The actual economic, small business, or consumer impact was not estimated in the economic, small business, and consumer impact statement submitted during the making of the rule and that actual impact imposes a significant burden on persons subject to the rule.
8. The signature of the person submitting the petition.

**R4-8-503. Public Comments**

- A. On or before the date of the close of record, a person may comment upon a rule proposed by the Board by submitting written comments on the proposed rule or upon any other matter noticed for public comment by the Board in the Arizona Administrative Register.
- B. The Board considers a written comment submitted on the date it is received by the Board, except if a comment is mailed, the postmarked date is considered the date of receipt.
- C. The Board shall consider all written comments that conform with A.R.S. § 41-1023.

**R4-8-504. Oral Proceedings**

- A. A person requesting an oral proceeding, as prescribed in A.R.S. § 41-1023(C), shall:
  1. File the request with the Board;
  2. Include the name and current address of the person making the request; and
  3. Refer to the proposed rule and include, if known, the date and issue of the Arizona Administrative Register in which the notice of the proposed rule is published.
- B. The Board shall record an oral proceeding either electronically or stenographically, and shall make any cassette tape, transcript, register, and written comment received part of the official record.
- C. The presiding officer shall use the following guidelines to conduct an oral proceeding:
  1. Registration of attendees. Registration of attendees is voluntary;
  2. Registration of persons intending to speak. A person wishing to speak shall provide the person's name, representative capacity, if applicable, a notation of the person's position with regard to the proposed rule and the approximate length of time the person wishes to speak;
  3. Opening of the record. The presiding officer shall open the proceeding by identifying the rule to be considered and the location, date, time, and purpose of the proceeding, and by presenting the agenda;
  4. A statement by Board representative. A Board representative shall explain the background and general content of the proposed rule;



*Arizona Administrative Register*

**Notices of Final Rulemaking**

R12-15-1220	New Section
R12-15-1221	New Section
R12-15-1222	New Section
R12-15-1223	New Section
R12-15-1224	New Section
R12-15-1225	New Section
R12-15-1226	New Section

**2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**

Authorizing statute: A.R.S. § 45-105(B)(1)

Implementing statute: A.R.S. § 45-1202(C)

**3. The effective date of the rules:**

June 12, 2000

**4. A list of all previous notices appearing in the Register addressing the final rule:**

Notice of Rulemaking Docket Opening: 5 A.A.R. 621, February 26, 1999

Notice of Proposed Rulemaking: 5 A.A.R. 3170, September 17, 1999

**5. The name and address of agency personnel with whom people may communicate regarding the rulemaking:**

Name: Dan Lawrence

Address: Arizona Department of Water Resources  
500 North 3rd Street  
Phoenix, Arizona 85004

Telephone: (602) 417-2445

Fax: (602) 417-2423

**6. An explanation of the rule, including the agency's reasons for initiating the rule:**

These rules establish reasonable standards consistent with accepted engineering practice. They designate the types of dams to which the rules apply; set forth a program for permitting construction of new dams and for the repair, alteration, enlargement, breach, and removal of existing dams; establish requirements and owner responsibilities for operation, maintenance, and emergency action; and provide for enforcement.

**7. A reference to any study that the agency relies on in its evaluation of or justification for the final rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study and other supporting material:**

National Dam Safety Program, P.L. 104-303 Section 215, October 1996

U.S. Army Corps of Engineers, National Program for Inspection of Non-Federal Dams, 1979

Federal Emergency Management Agency,

Model Dam Safety Program, FEMA 316, March 1998

Dam Safety: An Owner's Guidance Manual, FEMA 145, 1987

Federal Guidelines for Dam Safety: Emergency Action Planning for Dam Owners, FEMA 64, 1998

Federal Guidelines for Dam Safety: Hazard Potential Classification Systems for Dams, FEMA 333, 1998

U.S. Department of Agriculture, National Resource Conservation Service, Part 633 National Engineering Handbook, Chapter 26, Gradation Design of Sand and Gravel Filters, 1994

International Commission on Large Dams, Embankment Dams, Granular Filters and Drains, Bulletin 95, 1994

U.S. Department of the Interior, Bureau of Reclamation, Design of Small Dams, 1987

Federal Energy Regulatory Commission, Engineering Guidelines for the Evaluation of Hydropower Projects, April 1991 (Some chapters revised since 1991)

Colorado Division of Water Resources, Rules and Regulations for Dam Safety and Dam Construction, 1988

State of Utah, Statutes and Administrative Rules for Dam Safety, July, 1996

Ohio Department of Natural Resources, Rules and Regulations for Dam Safety, 1999

Washington State Department of Ecology, Dam Safety Guidelines and technical Notes, 1992

The references identified above may be reviewed at the office of the Arizona Department of Water Resources, Dam Safety Section, 500 North 3rd Street, Phoenix, Arizona 85004.

**8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**

Not applicable

**9. The summary of the economic, small business, and consumer impact:**

Arizona Revised Statutes §§ 45-105(B) and 45-1202(C) require the Director to adopt rules and issue general orders to effectuate A.R.S. Title 45, Chapter 6, Article 1, Supervision of Dams, Reservoirs and Projects. The purpose of the Dam Safety Procedures (“rules”) is to clarify the requirements of law as interpreted by the Department of Water Resources (“Department”). While there will be no major changes in the Department’s administration of the dam safety program, the rules will result in a better understood and more efficient program. In general, economic impacts on the Department and the groups affected by the rules will be minor.

The primary group affected by the rules will be dam owners. Dam owners include private individuals and public entities, such as state agencies, counties, cities, and towns. Also affected by the rules will be people working in the private sector, including engineering and other technical consultants and construction firms. Because the rules make few changes to the safety of dams program currently administered by the Department, the major impact of the rules will be improved communication and cost savings resulting from better planning and efficiency. Dam owners will be able to better plan and anticipate application requirements and costs. The private sector assisting in planning and construction will have access to more complete information regarding requirements and better informed clients seeking their services. While the Department will exercise the same administrative and oversight authority over all jurisdictional dams, in general only new dams will be required to comply with the dam design requirements of the rules. Existing dams will not be required to undertake expensive alterations to comply with the design requirements of the rules. If, however, an existing dam is determined by the Department to be unsafe, or the owner plans a major repair or alteration that would make the upgrade cost efficient, the Department will require the owner to comply with the standards in the rules that are relevant to protecting human life and property.

The following paragraphs describe changes made by the rules that may result in economic impacts:

A new requirement of the rules will shift certain costs from the public to owners planning to construct a new dam. Under the rules, owners are required to demonstrate that the construction will not increase the potential for flooding to people living near the spillway channel or within the reservoir area. This demonstration is likely to require the owner to purchase more land or a flood easement. The new costs borne by the owner will depend on land costs. There is countervailing savings and greater protection to the members of the public residing in the area of potential flooding. The value of the savings is dependent on property values and flood frequencies.

The rules specify a schedule for dam inspections, which is equivalent to national standards. Although the schedule increases the frequency of inspections from current practice, the Department considers the schedule appropriate because the fees for inspections performed by the Department are minimal and protection of the public will be enhanced. A.A.C. R12-15-151(B)(11). The rules allow owners to use qualified engineers to conduct their own inspections in place of Department inspections. Dam owners whose staff engineers conduct their inspections will save money. The financial impact to the Department will be reduced to the extent of the increase in owner inspections.

**10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):**

Minor grammatical and stylistic changes were made at the request of GRRC staff.

**Table of Contents.**

The Department added Tables 1, 2, 3, 4, and 5 to the Table of Contents.

**R12-15-1201.** The Department struck proposed rule R12-15-1201 governing the title and authority and proposed rule **R12-15-1202(A)** prescribing purpose and scope of the Article as duplicative. Proposed rule R12-15-1202(B) now appears as R12-15-1201 with the heading Applicability. The Department renumbered the Sections accordingly.

**(B)(5).** The Department struck former (5) because it was ambiguous.

**R12-15-1202.**

**(14).** The Department expanded the definition of “flood control dam” to include collection of sediment or debris.

**(21).** The Department amended the definition of “intangible losses” to clarify that a public natural resource management or protection agency must identify and evaluate intangible property before the Department may consider it as a factor in the downstream hazard potential of a dam.

**(23).** The Department amended the definition of “levee” to clarify that the purpose of a levee is not to impound water.

**(32).** The Department changed “and/or” to “and”

**(39).** The Department added “or other liquids” to the description of what may be impounded in a reservoir, for consistency with definitions (18) and (34).

**(43).** The Department added a reference to “sediment or debris” to the definition of “storage capacity”.

**(46).** The Department changed “and/or” to “or”.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**R12-15-1203.**

(A). For clarity, the Department changed the order of the provisions describing dams that are exempt from jurisdiction. The provision describing the category of dams designed by the federal government, but subject to jurisdiction now appears in R12-15-1203(2).

**R12-15-1205.** The Department changed the heading of proposed R12-15-1221 to General Responsibilities and moved it to R12-15-1205. The Department renumbered Sections accordingly.

**R12-15-1206.**

(B). The Department enlarged the description of the hazard potential classification to include an evaluation of land use zoning and development projected for the affected area in the 10 year period following assessment.

(2)(a.) The Department changed the phrase “result in no probable loss of human life” to “unlikely to result in loss of human life” for clarity; and provided more detail to explain that the determination of probable loss of human life is based on the presence of residences, overnight campsites, and control of access to the potential inundation area by the owner.

(2)(a) and Table 3. The Department struck the word “designated” from the phrase “100-year floodplain” because a floodplain that has not been delineated by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program may be delineated using methods outlined in State Standard 2-96 “Requirements for Floodplain and Floodway Delineation in Riverine Environments” available from the Director. The same correction was made at R12-15-1211(A)(6)(c).

(4). The Department clarified that the hazard potential classification of each dam may be revised as appropriate upon a dam safety inspection.

**R12-15-1207.**

(A). The Department inserted “breaching” for consistency with R12-15-1209 and R12-15-1210.

(B). For completeness, the Department inserted items (3) and (4).

(C). The Department inserted as subsection (C) to apply to the application process: “An applicant is not required to comply with a requirement in this Article if the Director finds that, considering the site characteristics and the proposed design, the requirement is unduly burdensome or expensive and is not necessary to protect human life or property. The Director shall consider the size, hazard potential classification, physical site conditions, and applicability of a requirement to a proposed dam. The Director shall state in writing the reason or reasons the applicant is not required to comply with a requirement”. The new provision clarifies that the Director does not waive dam safety requirements, but in specific circumstances may find them to be inapplicable or unnecessary and to provide a standard for the determination. The Department struck waiver language from R12-15-1207(C), R12-15-1209, R12-15-1210(A), (B), (G), and (I), R12-15-1211(A) and (G), R12-15-1213, R12-15-1215, and R12-15-1216 (A) and (B). The Department inserted the new language into R12-15-1220 to apply to existing dams.

(E)(3). The Department replaced the phrase “dam safety” with the statutory phrase “human life and property”.

(4). The Department struck duplicative phrases from the description of the process for retaining engineers in the private sector to expedite review of applications.

(8)(c) and (F). The Department added references to breach for consistency. Subsection (3) was combined with (2) for clarity.

(G). The Department struck old subsection (F) as duplicative.

**R12-15-1208.**

(A)(9). The Department changed “and/or” to “a right to”, which is the phrase used in the statute.

(10). The Department rewrote the provision requiring financial capability for clarity. The Department made the same modification to R12-15-1209(E)(2) and R12-15-1210(A)(10).

**R12-15-1209.**

(A). The Department added language to clarify that more than one breach of a dam may be made, with the approval of the Director. Conforming changes to include multiple breaches were made throughout the Section.

(D). The Department added a sentence to clarify that the method of breaching or removal requires the Director’s approval.

(F). The Department inserted a provision governing reduction of a dam to nonjurisdictional size.

**R12-15-1210.**

(A)(5). The Department clarified the subsection requiring the responsible engineer to demonstrate that a dam fits the low hazard potential classification. The responsible engineer must show the inundation area and demonstrate that dam failure or improper operation will not result in loss of human life or significant property damage. The responsi-

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

ble engineer does not evaluate intangible losses, but rather submits a map so they can be evaluated by a natural resource management or protection agency. The Department made the same change at R12-15-1211(A)(6).

**(A)(11).** The Department struck the provision prohibiting access to the potential area of inundation. The requirement is not necessary for low hazard potential dams.

**(C).** The Department struck the former (B)(6) as duplicative. The new (C) sets the requirements for reducing a low hazard potential dam to nonjurisdictional size.

**(J),(K), and (L).** The Department struck the subsections as duplicative and renumbered accordingly.

**R12-15-1211.**

**(A).** All of the statutory requirements are now included in (A). (A)(8) includes a description of the simplified requirement for drawings. (A)(9) includes a description of the simplified requirements for specifications. The Department added standards to (B) to establish factors for the Director's consideration.

**(C).** Subsection (C) states that breach or removal of a very low hazard potential dam to nonjurisdictional size is exempt from the approval process of R12-15-1207, but requires owners to give notice prior to reducing the size of the dam. The Department struck former subsection (B), which set forth requirements for approval for the breach or removal of a very low hazard potential dam. The adopted rule makes a conforming change to subsection (D) by striking the reference to (B). The Department changed the phrase "date of construction" to "date that construction begins" for clarity.

**(G).** The Department struck references to "breach" and "removal" from (G), (G)(1), and (G)(2) because the requirements governing removal are in subsection (C).

**(3) and (4).** The Department removed the requirement that the completion report for a very low hazard potential dam be certified by a professional engineer. Instead, the rule states what the completion report shall include.

**(H)(4).** The Department struck the requirement of an emergency action and awareness plan for very low hazard potential dams.

**R12-15-1212.**

The Department inserted a reference to low hazard potential dams into the Section for consistency with the title of the Section.

**R12-15-1213.**

**(3).** The Department removed the requirement that as constructed drawings be submitted as paper prints. Mylar is acceptable.

**(7) and (8).** The Department struck the redundant reference to significant and high hazard potential dams.

**R12-15-1214.** The Department changed the heading from "License of Approval" to "Licensing". The Department conformed the phrase throughout the Section.

**R12-15-1215.**

**(1) and (2).** The Department modified the requirement for an engineer's seal to match the rules of the Board of Technical Registration.

**(3)(t).** The Department inserted a requirement that the engineering design report for high, significant, and low hazard dams include a discussion of foundation conditions including the potential for subsidence, fissures, collapsible soils, dispersive soils, and sinkholes. The same change is made at R12-15-1216(A)(5) under Geotechnical Requirements.

**R12-15-1216.**

The Department struck the words "proposed" and "existing" and the phrase "new and proposed" throughout the Section for consistency.

**(A)(1).** The Department moved the spillway requirement to (A)(1).

**(1)(b) and (c).** The Department struck the redundant sentence "Emergency spillway requirements are as follows"; struck the word "all" in front of "spillways" throughout the Section; and replaced "breach" with the more general term "sudden release". The Department replaced "design peak discharge" with the more precise "discharge resulting from the inflow design flood".

**(d).** The former provision prohibited spillway flows from encroaching on the dam. The Department expanded the rule to include the alternative of designing erosion protection.

**(e).** The Department rewrote the provision to clarify that spillways in combination with outlets shall be able to safely pass the peak discharge flow rate.

**(2)(d) and former (e).** The Department removed the provisions governing existing dams. See R12-15-1220. Subsection (d) was rewritten to clarify that freeboard requirement is whichever of the list is the largest. For clarity, the Department replaced the term "surface" with "depth above the spillway crest".

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

(3). The Department replaced “outlet” with “outlet works,” a more inclusive term. The Department struck the last sentence of (3) of the proposed rules because it applied only to existing dams. The Department reformatted the list to aid understanding, adding subsection (e).

(c). The Department inserted “a filter diaphragm or other” to provide an example of a measure to reduce piping.

(g) and (i). The Department inserted “gated” in front of “outlet conduits” for clarity. The Department simplified the requirements of (i) to make them more general.

(j). The Department added the requirement of a trash rack.

(k). The Department made a separate provision of the requirements regarding an air vent pipe that appeared in the former (h).

(l). The Department struck as unnecessary detail the sentence regarding computation of embankment loads using Marston’s Theory.

(4)(a). The Department inserted “affected” before “property owners”; replaced “flow” with “flood”; and replaced “flood channel” with “reservoir” to add precision.

(5). The Department moved Geotechnical Requirements from subsection (B)(1) to a more appropriate place as (5) under “General Requirements”. Accordingly, “Seismic Requirements” is renumbered as (6). The Department struck the sentence stating that seismic requirements do not apply to flood control dams.

(B)(1). The Department added greater detail to the provisions regarding embankment dams. The Department changed the phrase “minimum stability factors of safety” to “minimum factors of safety for stability” for clarity. Table 5 now includes a category for embankments greater than 50 feet. The Department expanded the requirements of anisotropy analysis for clarity; struck the former R12-15-1216(B)(1)(c)(vi); and struck the requirement of a stability analysis for very low hazard dams.

(2). The Department expanded the explanation of seismic requirements of embankment dams for completeness. The citation to R12-15-1216(A) was changed to Subsection(A)(6). In former provision (c), the Department changed “and/or” to “or”.

(3). The Department inserted a requirement of seepage collection in place of control; struck the reference to subsidence fissures as a cause of piping; replaced “filter” with the more general term “drain”; expanded the requirement to all chimney drains; and inserted requirements for the design of internal drains for clarification. The Department inserted the former subsection (d) as a subsection to (b) and added “using only granular materials” for additional detail. The Department struck the requirements for seepage collection pipes for the reason that requirements of pipes are case-specific and cannot be stated generally in a rule. The Department moved the provision regarding utility installation requirements to R12-15-1220. Subsection (c) was reformatted to remove the subsections.

(C). The Department struck the subsection as a repetition of R12-15-1204.

**Table 4.** The Department expanded the Table and its explanation to clarify that the inflow design flood magnitude for high hazard dams of all sizes require an analysis of persons at risk and downstream damage.

**Table 5.** The Department inserted an explanatory footnote stating that the factors of safety prescribed in the table do not apply to dams constructed on a clay shale foundation. A clay shale foundation presents different risk factors for failure and needs to be analyzed on a site-specific basis.

**R12-15-1217.** The Department changed the Section heading from Actions that Do Not Require Prior Approval of the Director to Maintenance and Repair; Emergency Actions for easier reference.

(A). The Department changed the phrase “impair or adversely affect” to “impair” throughout the Section for clarity.

(B). The Department inserted an intermediate category for dam repairs, between routine maintenance and major repairs, the latter of which require an application and Department approval. The intermediate procedure permits an owner who has a standard detail or method of repair on file with the Department to submit a letter requesting approval of the repair.

**R12-15-1218.**

The Department inserted the terms “repaired” and “breached” for completeness.

**R12-15-1219.**

The Department corrected the lettering of subsections for consistency.

(E). The Department rewrote the subsection to clarify that an owner may retain an engineer to conduct an inspection and submit a report instead of an inspection conducted by the Department.

(F). The Department added the terms “reconstruction” and “breach” for completeness.

**R12-15-1220.**

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

The Department rewrote the rule governing existing dams. Existing dams are not required to comply with the requirements for new dams set forth in R12-15-1216 unless the Director finds that compliance is necessary to protect human life and property, or it would be cost effective to upgrade the dam at a time a major alteration or repair is done. Subsection (B) now includes factors the Director must use in making the determination.

**R12-15-1221.**

(D). The subsection requires an owner to update the emergency action plan at least annually. The Department added examples of changes that merit more frequent updates.

**R12-15-1228.**

At the recommendation of GRRRC staff, the Department struck the index.

**11. A summary of the principal comments and the agency response to them:**

**A. Chuck Gopperton, PE, Associate Engineer, Stantec**

1. R12-15-1208(A)(5). Stantec recommends that the rule allow construction drawings to be submitted on Mylar.  
Response: The Department accepted the recommendation.
2. R12-15-1215(2)(a). Stantec recommends that the seal and signature of the responsible engineer should be required only on the cover page and table of contents instead of on each page of the specifications.  
Response: The rule now requires the responsible engineer to comply with A.A.C. R4-30-304, adopted by the Board of Technical Registration.
3. R12-15-1216(A)(1)(b). Stantec recommends making the provision regarding design protections against erosion more general.  
Response: The rewritten requirement offers the dam designer two alternatives. The design may include a control structure to avoid dangerous erosion, or the applicant may demonstrate that a flood would not result in a breach.
4. R12-15-1216(A)(1)(d). Stantec recommends changes to the provision to address the problem of erosion.  
Response: The former provision prohibited spillway flows from encroaching on the dam. The Department expanded the rule to include the alternative of designing erosion protection.
5. R12-15-1216(A)(3)(f). Stantec recommends a different standard for conduits.  
Response: The Department simplified the requirement regarding the conduit trench, and clarified the use of reinforcing steel.
6. R12-15-1216(A)(3)(i). Stantec recommends rewording the provision for clarity.  
Response: The Department accepted Stantec's clarifying change.
7. R12-15-1216(A)(3). Stantec recommends changing (1) and (2) to (a) and (b).  
Response: The provision was duplicative and has been removed.

**B. Chuck Shipley, President, Arizona Mining Association ("AMA")**

1. R12-15-1202(26). Definition of liquid-borne material. The AMA contends that the definition of "liquid-borne material" contained in the rules is too restrictive. The AMA urges that mining process solutions, in addition to slurry, should be included in the definition of liquid-borne material. The AMA contends that other federal and state authorities regulate the safety of dams, and that the Department duplicates those efforts.  
Response: A.R.S. § 45-1201(1) exempts structures impounding "liquid-borne material" from the Department's regulatory authority over dam safety. The phrase "liquid-borne material" is not defined by statute. Since adoption of the exemption, the Department has interpreted the phrase to mean mining milled waste that is transported by water. The Department's policy is codified in the rules.  
The Department's interpretation is consistent with the plain meaning of the words. Webster's New Collegiate Dictionary (1981) states that "borne" is the past participle of "bear". "Bear" means "to move while holding up or supporting, to support the weight of". Accordingly, the plain meaning of liquid-borne material is that the material is borne or supported by the liquid. The definition describes suspended matter in a liquid, which is a slurry. Mining mill waste is often managed by transporting it in a slurry to a storage impoundment. The storage of mining milled waste is typically accomplished by allowing the solid portion to settle out while the liquid is recycled. The process results in a material that is mostly solid with some liquid on the surface. An impoundment of a mining mill waste slurry has a smaller potential for a sudden, uncontrolled release of a liquid. Under the rules, the storage impoundment of a mining mill waste slurry is exempt.  
A substance in solution is different from a slurry. A "solution", according to Webster's New Collegiate Dictionary, is "a liquid homogeneous mixture". It would be unwise public policy to exempt from dam safety regulation all dams impounding liquids containing minerals or other substances in solution. Substances in solution include a vast variety of liquids that are appropriately regulated by the dam safety program, including dams impounding cursory treated wastewater, effluent, poor quality water, power plant blow-down

water, and pregnant leachate solution. Dams impounding substances in solution include large, high hazard dams located in urban areas. Some of the substances in solution are toxic, such as pregnant copper leachate or pregnant gold cyanide solution, which is a mining technology that uses acid to extract minerals in solution from ore rock. The public safety is served by recognizing the regulatory authority over dams impounding liquids with substances in solution.

Impoundments that do not present a danger to people or property outside the ownership or control of the owner of the impoundment are already exempt from the Department's jurisdiction. In 1999, the Department and the mining industry worked together to pass legislation exempting release-contained barriers from the Department's jurisdiction. A release-contained barrier is an artificial barrier whose entire storage capacity would remain on the property of the owner if it failed. (See Laws 1999, Chapter 187, Section 11.) The AMA now seeks to remove from jurisdiction certain dams that could flood property the dam owner does not own or control. Dams that can damage the property of others if they fail should be regulated.

The narrow words of the statute exempting liquid-borne material do not connote a legislative intent to exempt from jurisdiction the broad category of substances in solution. It is prudent public policy to limit the exemptions to the Department's authority to those specified by statute. Finally, it is a basic rule of statutory construction that the statement of one exception implicitly excludes other, unstated exceptions. See State v Roscoe, 185 Ariz. 68, 71, 912 P.2d 1297, 1300 (1996); Estate of Tovrea v Nolan, 173 Ariz. 568, 573, 845 P.2d 494, 499 (App. 1992).

The AMA's contention that the Department duplicates the regulatory work of numerous other agencies is not correct. It is true that there are multiple regulatory requirements of mining activities in Arizona. However, there is no agency besides the Department that uses professional engineers with specialized knowledge of dam technology to oversee the structural safety of dams before the dams are constructed and placed in operation.

The authority of the Arizona State Mine Inspector and the Mining Safety and Health Administration extend principally to health and safety of workers on the job site, reclamation of mined land, and public safety hazards at abandoned mining sites. See Arizona Constitution, Article XIX; A.R.S. Title 27, Chapter 1, Article 2 and Chapter 5; 11 A.A.C. 1 and 11 A.A.C. 2; and 30 CFR Subchapter N, §§ 50. Generally, mining activities in Arizona are also subject to requirements of the Clean Water Act, [40 C.F.R. 440.102(c) and 440.103(c)], the Arizona Mined Land Reclamation Act (A.R.S. § 27-901 et seq.), the Arizona Department of Environmental Quality water quality control (A.R.S. Title 49, Chapter 2, Article 3), and applicable local land use regulation.

Only the Department conducts pre-construction evaluation of the engineering of a dam, its hazard potential, its suitability to a particular site, and the sufficiency of its planned operation and maintenance. It is crucial to evaluate a dam during the planning stage, so that an applicant can modify a flawed design before beginning construction. It is vital to oversee the progress of construction to verify that the contractor and engineer are constructing the dam as it was designed and that they are taking prudent quality control measures. The dam safety section regards these two responsibilities as its highest priority. The Department is the only regulatory agency that exercises oversight authority during the design and construction phases.

2. R12-15-1211. Very Low Hazard Jurisdictional Dams. The AMA recommends several changes to the requirements for very low hazard jurisdictional dams. It recommends that an emergency action plan should not be required. It urges that the description of dams that qualify as very low hazard jurisdictional dams is too restrictive, and that the requirement that the mining operation exclude unauthorized persons from the area is burdensome.

The AMA also contends that filing and construction requirements for very low hazard dams are too rigorous. First, the AMA contends that requiring a professional engineer seal the plans is duplicative. Second, the AMA recommends that the requirement for detailed drawings and specifications is unnecessary. Third, the AMA recommends that a completion report should be required in place of post-construction certification. Finally, the AMA recommends deleting conditions from the license.

Response: The category of very low hazard potential dams was designed to streamline the regulation of dams that would not injure people or flood land outside a floodplain or property owned or controlled by the dam owner. Consequently, the owner will not be required to prepare an emergency action plan. The Department also removed the requirement that the owner prohibit access of unauthorized persons to the site. The rules now require a completion report instead of certification by a professional engineer.

The application requirements are limited to those required by statute. The rule describes a simplified level of detail required for drawings and specifications, and a waiver of the requirement of drawings and specifications for dam repairs.

The Department has retained the requirement that a professional engineer demonstrate that the dam qualifies as very low hazard and seal and sign the design. The streamlined approval process and reduced oversight of construction, maintenance, and operation of very low hazard dams is based on the assurance of a qualified

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

professional that the design is sound, and that failure of the dam would not result in loss of life or significant property damage. Conditions on the license are needed to specify the safe storage level of the reservoir and the owner's responsibility to operate and maintain the dam in a way that continues its very low hazard classification.

3. R12-15-1202(21) and R12-15-1206. Downstream Hazard Potential Classification. The AMA recommends removing the consideration of "intangible losses" from determination of a dam's downstream hazard potential.

Response: The Department is charged with overseeing the safety of dams to protect life and property. See A.R.S. §§ 45-1207(A), 45-1209(C), and 45-1212(A).

The risk posed by a dam to natural resources, potentially irreplaceable features, and other non-economic values is an appropriate element in the downstream hazard potential analysis. Intangible property values include petroglyphs, native species habitat, and riparian areas that would suffer long term damage from a breach of impounded water or toxic liquids.

The rule does not authorize the Department to make the determination of the value of intangible property. The rule clarifies that a public natural resource management or protection agency must identify and evaluate any intangible value put at risk by a proposed dam construction or enlargement.

4. R12-15-1202(23). Levee. The AMA recommends rewording the definition of "levee" for clarity.

Response: The purpose of a levee is not to impound water, although a levee may impound water for brief periods of time following a storm event. For clarity, the Department has replaced the second sentence of the definition with the sentence: "The levee is not used to impound water."

5. R12-15-1202(18) and (34). Definitions of "Impound" and "Reservoir". The AMA recommends striking the word "liquids" from both definitions.

Response: "Dam" is defined by statute as an artificial barrier for the impounding or diversion of water. A.R.S. § 45-1201(1). "Water" is not defined. The only statutory limit on the nature of impounded water is the exclusion of "liquid-borne material". A.R.S. § 45-1201(1). Because the exclusion is specific, other categories of water are presumed to be included. (See State v Roscoe, 185 Ariz. 68, 71, 912 P.2d 1297, 1300 (1996) and Estate of Tovrea v Nolan, 173 Ariz. 568, 573, 845 P.2d 494, 499 (App 1992).

The rule codifies the Department's interpretation of A.R.S. § 45-1201(1) that "water" includes "liquids". The Department's jurisdiction applies to impoundments of a wide range of quality and composition, including mining waste in solution, cursory treated waste water, power plant blow-down water, and effluent. Applying the State's dam safety jurisdiction to all types of water and water solutions is the practice throughout the United States under the National Dam Safety Act. It is prudent public policy to limit exceptions to the State's jurisdiction to those specified by statute.

6. Use of Geosynthetics. The AMA contends that the rules unnecessarily restrict the use of geosynthetics in dam designs.

Response: Geosynthetic liners are not fail-safe. They are appropriate in some designs as a redundant safety feature. R12-15-1216(B)(3)(c) states that geosynthetics shall not be used as the only defense against dam failure, and requires that they be used only in locations where they are accessible for repair and will not create an unsafe condition.

The rule is consistent with internationally recognized recommendations.

**C. Richard Mohr, Director, Environmental Operations, Phelps Dodge Corporation**

1. R12-15-1202(26). Definition of "liquid-borne material". Phelps Dodge recommends that the definition of "liquid-borne material" should not be limited to mine tailings.

Response: See response to item B(1).

2. R12-15-1202(18) and (34). Definitions of "reservoir" and "impound". Phelps Dodge recommends that "liquids" should be stricken from the definitions of "reservoir" and "impound".

Response: See response to item B(5).

3. R12-15-1202(21) and R12-15-1206. Intangible losses. Phelps Dodge recommends that intangible losses be removed from consideration of downstream hazard potential.

Response: See response to item B(3).

4. Determination of hazard potential for very low hazard dams. Phelps Dodge recommends expanding the description of dams eligible for the very low hazard classification.

Response: See response to item B(2).

5. R12-15-1211. Application requirements for very low hazard dams. Phelps Dodge recommends reducing the Department's oversight of very low hazard dams.

Response: See response to item B(2).

6. R12-15-1211. Emergency action and awareness plan for employees. Phelps Dodge recommends that an emergency action and awareness plan not be required for very low hazard dams.

Response: See response to item B(2).

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

7. R12-15-1202(23). Regulation of diversion structures. Phelps Dodge recommends rewording the definition of levee for clarity.

Response: See response to item B(4).

**D. Gary Atkin, District Manager, Pinetop-Lakeside Sanitary District**

R12-15-1203. The Sanitary District recommends that wastewater treatment facilities should be exempt from the rules.

Response: It is not appropriate to make a blanket exemption of wastewater treatment facilities. Some wastewater treatment facilities present a potential hazard to human life and property, and qualify as significant or high hazard potential.

The Department did not change the rule.

**E. Thomas D. Johnson, P.E., R.L.S., Deputy Chief Engineer, Flood Control District of Maricopa County (“MCFCD”)**

1. Comments on Preamble. MCFCD contends that the rules will have a significant economic impact on dam owners.

Response: The Department has amended R12-15-1220 to clarify that owners of existing dams will not be required to undertake structural modifications to comply with the requirements for construction of new dams unless the existing dam is in an unsafe condition, becomes unsafe in the future, or the owner chooses in the future to perform a major repair during which the improvements can be efficiently incorporated. The Department added three factors the Director must consider in determining whether it is cost effective to upgrade a dam. The factors are the hazard potential classification, the relative cost of the upgrade, and whether a more cost effective alternative exists.

2. Comments on R12-15-1202. Definitions.

- a. MCFCD recommends adding definitions for “breach”, “reconstruct”, “remove”, and “repair”.

Response: The application and design requirements do not depend upon which action is taking place. Definitions are not necessary. The Department did not change the rule.

- b. R12-15-1202(12). MCFCD recommends that the definition of “enlargement to an existing dam or appurtenant structure” be revised to recognize enlargements made for safety reasons.

Response: The application requirements for an enlargement of an existing dam do not differ depending on the reason for the enlargement. The Department did not change the rule.

- c. R12-15-1202(14) and (43). MCFCD recommends that the definition of “flood control dam” and “storage capacity” recognize the presence of sediment.

Response: The definitions of a flood control dam and storage capacity have been rewritten to include sediment collection.

3. Classification of Dams, R12-15-1206.

- a. R12-15-1206(B)(1). MCFCD requested clarification of how future incremental adverse consequences would be determined.

Response: The Department added a sentence directing the owner to consider land use zoning and development projected in the affected area for the ten year period following the assessment of the hazard potential classification of the dam.

- b. R12-15-1206(B)(1)(a). The hazard potential classification considers whether failure or improper operation of the dam would result in loss of life. A dam owner must restrict human access to the area for the Department to determine that loss of human life is unlikely. MCFCD recommended that the rule clarify that the dam owner must control human access to the area of potential inundation, in addition to the dam site.

Response: MCFCD is correct. The last sentence of R12-15-1206(B)(1)(a) now includes reference to the area of inundation.

- c. R12-15-1206(B)(4). MCFCD recommended rewriting R12-15-1206(B)(4) to clarify that the hazard classification of a dam may be revised as appropriate upon inspection.

Response: The Department made the recommended change.

4. R12-15-1208. Waiver. MCFCD recommends replacing the term “waiver” throughout the rules with “directed otherwise” to clarify that filing and safety requirements are not waived by the Department, but rather found to be inapplicable or unnecessary in specific circumstances.

Response: The Department inserted as R12-15-1207(C) the following provision to apply to the application process: The applicant is not required to comply with a requirement in this Article if the Director finds that, considering the site characteristics and the proposed design, the requirement is unduly burdensome or expensive and is not necessary to protect human life or property. The Director shall consider the size, hazard potential classification, physical site conditions, and applicability of a requirement to a proposed dam. The Director shall state in writing the reason or reasons the applicant is not required to comply with a requirement. Accordingly, waiver language was stricken from R12-15-1207(C), R12-15-1209, R12-15-1210(A),

- (B), (G), and (I), R12-15-1211(A) and (G), R12-15-1212, R12-15-1213, R12-15-1215, and R12-15-1216(A) and (B). The Department inserted the language into R12-15-1220 to apply to existing dams.
5. R12-15-1209. Breach and removal of dams. MCFCD recommends clarification to the requirements for breach or removal of dams.  
Response: The Department reworded the Section to clarify. The method of breaching must be approved by the Director. Multiple breaches follow the same process of approval. Removal includes reducing a dam to non-jurisdictional size or modifying a dam into a structure that does not impound water removals.
  6. R12-15-1210. Hazard potential classification. MCFCD asks about the process for certification.  
Response: The Department inserted at R12-15-1210(H)(4) a cross-reference to the process for demonstrating the hazard potential classification for a low hazard potential dam described in R12-15-1210(A)(5). The demonstration for a very low hazard potential dam is at R12-15-1211(A)(6).
  7. R12-15-1211. Designated 100-year floodplain. MCFCD inquires how a very low hazard potential dam may be classified if there is no designated floodplain.  
Response: The floodplain may be delineated using methods outlined in State Standard 2 – 96 “Requirement for Floodplain and Floodway Delineation in Riverine Environments,” which was adopted pursuant to A.R.S. §45-3605(A). A copy of the state standard is available from the Director.
  8. R12-15-1215. Subsidence. MCFCD recommends that the engineering design report required by R12-15-1215(3) include a discussion on subsidence.  
Response: R12-15-1215(3)(t) now requires a discussion of subsidence.
  9. R12-15-1216. Applicability of rules to existing dams. MCFCD recommends applying the emergency spillway requirements to new dams only.  
Response: The Department agrees that owners of dams that do not present a current risk to public safety should not be required to bear the costs of extensive redesign and reconstruction. Those dams not declared to be in an unsafe condition will not be required to upgrade the dam unless it is cost-effective to perform the upgrade at the time of other major alterations or repairs. R12-15-1220 has been amended to clarify the policy and prescribe considerations for the Director’s determination.
  10. R12-15-1216(A)(1)(e). Spillway design flood. MCFCD requests clarification of the term “spillway design flood”.  
Response: The Department substituted “inflow design flood,” a term defined at R12-15-1202(20), for “spillway design flood”.
  11. R12-15-1216. Requirements for new dams. MCFCD recommends certain design requirements be addressed to new dams only.  
Response: The Department accepted the recommendation.
  12. R12-15-1216(A)(6). Seismic design requirements. MCFCD recommends seismic criteria should be applied to flood control structures.  
Response: The Department determined that the seismic design requirements should also apply to flood control dams.
  13. R12-15-1217. Approval of dam repair activities. MCFCD recommends that an intermediate category be created for repairs that are not routine dam maintenance, which the Department does not oversee, and major repairs, which require an application and approval.  
Response: R12-15-1217(B) now includes a procedure by which the Director may approve general maintenance and ordinary repairs upon submittal of a letter by the owner when the owner has a maintenance plan on file with the Department.
  14. R12-15-1220. Requirements for existing dams. MFCFCD states that the rules are not clear regarding the requirements for existing dams.  
Response: The rule has been amended to require changes to existing dams only when the dam is in an unsafe condition, or the changes can be incorporated efficiently into a major repair.

**F. Jon Benoist, ADWR Dam Safety**

1. Criteria for exempt dams. Mr. Benoist recommends reorganizing the three criteria of exempt dams in a different order for clarity.  
Response: The Department rearranged the order of R12-15-1203(1)(a), (b), and (c).
2. Seismic design requirements. Mr. Benoist recommends adding seismic design requirements for flood control dams.  
Response: See response to (E)(12)

**12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**

Not applicable

**13. Incorporations by reference and their location in the rules:**

Not applicable

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**14. Was this rule previously adopted as an emergency rule?**

No

**15. The full text of the rules follows:**

**TITLE 12. NATURAL RESOURCES**

**CHAPTER 15. DEPARTMENT OF WATER RESOURCES**

**ARTICLE 12. DAM SAFETY PROCEDURES**

Section

- R12-15-1201. ~~General Provisions~~ Applicability
- R12-15-1202. ~~Professional Engineering Requirement~~ Definitions
- R12-15-1203. ~~Application Procedure~~ Exempt Structures
- Table 1. Exempt Structures
- R12-15-1204. ~~Final Inspection and License of Approval~~ Provision for Guidelines
- R12-15-1205. ~~Plans and Specifications~~ General Responsibilities
- R12-15-1206. ~~Construction Control~~ Classification of Dams
- EXHIBIT A**
- Table 2. Size Classification
- Table 3. Downstream Hazard Potential Classification
- R12-15-1207. Application Process
- R12-15-1208. Application to Construct, Reconstruct, Repair, Enlarge, or Alter a High or Significant Hazard Potential Dam
- R12-15-1209. Application to Breach or Remove a High or Significant Hazard Potential Dam
- R12-15-1210. Application to Construct, Reconstruct, Repair, Enlarge, Alter, Breach, or Remove a Low Hazard Potential Dam
- R12-15-1211. Application to Construct, Reconstruct, Repair, Enlarge, Alter, Breach, or Remove a Very Low Hazard Potential Dam
- R12-15-1212. Construction of a High, Significant, or Low Hazard Potential Dam
- R12-15-1213. Completion Documents for a Significant or High Hazard Potential Dam
- R12-15-1214. Licensing
- R12-15-1215. Construction Drawings, Construction Specifications, and Engineering Design Report for a High, Significant, or Low Hazard Potential Dam
- R12-15-1216. Design of a High, Significant, or Low Hazard Potential Dam
- Table 4. Inflow Design Flood
- Table 5. Minimum Factors of Safety for Stability
- R12-15-1217. Maintenance and Repair; Emergency Actions
- R12-15-1218. Safe Storage Level
- R12-15-1219. Safety Inspections
- R12-15-1220. Existing Dams
- R12-15-1221. Emergency Action Plans
- R12-15-1222. Right of Review
- R12-15-1223. Enforcement Authority
- R12-15-1224. Emergency Procedures
- R12-15-1225. Emergency Repairs
- R12-15-1226. Non-Emergency Repairs; Loans and Grants

**ARTICLE 12. DAM SAFETY PROCEDURES**

**R12-15-1201. ~~General Provisions~~ Applicability**

- ~~**A.** The State Engineer's office is located at 222 Central Avenue, Suite 800, Phoenix, Arizona. All notices and contracts with the State Engineer shall be sent to and made at this address.~~
- ~~**B.** Forms with respect to these rules and regulations may be picked up or requested by mail at the address of the State Engineer. Copies of these rules will also be available at the office of the State Engineer. A copy of the application form is shown as Exhibit A following this Article.~~
- A.** This Article applies to any artificial barrier meeting the specifications of A.R.S. § 45-1201(1) as interpreted by R12-15-1204. This Article applies to an application for the construction of a dam and reservoir; an application to reconstruct, repair, alter, enlarge, breach, or remove an existing dam and reservoir, including a breached or damaged dam; operation and maintenance of an existing dam and reservoir; and enforcement. A structure identified in R12-15-1203 is exempt from this Article.
- B.** This Article is applicable to any dam regardless of hazard potential classification, with the following exceptions:

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

1. R12-15-1208, R12-15-1209, R12-15-1213, R12-15-1221, R12-15-1225, and R12-15-1226 apply only to a dam classified as a high or significant hazard potential dam.
2. R12-15-1210 applies only to a dam classified as a low hazard potential dam. A low hazard potential dam is exempt from R12-15-1208, R12-15-1209, R12-15-1211, R12-15-1213, R12-15-1221, R12-15-1225, and R12-15-1226.
3. R12-15-1211 applies only to a dam classified as a very low hazard potential dam. A very low hazard potential dam is exempt from R12-15-1208, R12-15-1209, R12-15-1210, R12-15-1212, R12-15-1213, R12-15-1215, R12-15-1216, R12-15-1221, R12-15-1225, and R12-15-1226.
4. R12-15-1216(B) applies only to an embankment dam.

**R12-15-1202. Professional Engineering Requirement Definitions**

- A.** The plans and specifications accompanying an application for construction of a new dam or alteration, repair, enlargement, or removal of an existing dam shall be prepared by or under the direction of a professional engineer registered under the laws of Arizona, having proficiency in civil engineering as related to dam technology.
- B.** Engineers of the United States Soil Conservation Service who design and construct dams for owners other than the United States are not required to be registered in Arizona for purposes of these rules.

In addition to the definitions provided in A.R.S. § 45-1201, the following definitions are applicable to this Article:

1. “Alteration or repair of an existing dam or appurtenant structure” means to make different from the originally approved construction drawings and specifications or current condition without changing the height or storage capacity of the dam or reservoir, except for ordinary repairs and general maintenance as prescribed in R12-15-1217.
2. “Appurtenant structure” means any structure that is contiguous and essential to the safe operation of the dam including embankments, saddle dikes, outlet works and controls, diversion ditches, spillway and controls, access structures, bridges, and related housing at a dam.
3. “Classification of dams” means the placement of dams into categories based upon an evaluation of the size and hazard potential, regardless of the condition of the dam.
4. “Concrete dam” means any dam constructed of concrete, including arch, gravity, arch-gravity, slab and buttress, and multiple arch dams. A dam that only has a concrete facing is not a concrete dam.
5. “Construction” means any activity performed by the owner or someone employed by the owner that is related to the construction, reconstruction, repair, enlargement, removal, or alteration of any dam, unless the context indicates otherwise. Construction is performed after approval of an application and before issuance of a license.
6. “Dam failure inundation map” means a map depicting the maximum area downstream from a dam that would be flooded in the event of the worst condition failure of the dam.
7. “Department” means the Arizona Department of Water Resources.
8. “Director” means the Director of the Arizona Department of Water Resources or the Director’s designee.
9. “Embankment dam” means a dam that is constructed of earth or rock material.
10. “Emergency spillway” means a spillway designed to safely pass the inflow design flood routed through the reservoir. If the flow is controlled by gates, it is a controlled spillway. If the flow is not controlled by gates, it is an uncontrolled spillway.
11. “Engineer” means a Professional Engineer registered and licensed in accordance with A.R.S. Title 32, Chapter 1, with proficiency in engineering and knowledge of dam technology.
12. “Enlargement to an existing dam or appurtenant structure” means any alteration, modification, or repair that increases the vertical height of a dam or the storage capacity of the reservoir.
13. “Flashboards” mean timber, concrete, or steel sections placed on the crest of a spillway to raise the retention water level that may be quickly removed at time of flood either by a tripping device or by designed failure of the flashboards or their supports.
14. “Flood control dam” means a dam that uses all of its reservoir storage capacity for temporary impoundment of flood waters and collection of sediment or debris.
15. “Hazard potential” means the probable incremental adverse consequences that result from the release of water or stored contents due to failure or improper operation of a dam or appurtenances.
16. “Hazard potential classification” means a system that categorizes dams according to the degree of probable incremental adverse consequences of failure or improper operation of a dam or appurtenances. The hazard potential classification does not reflect the current condition of the dam with regard to safety, structural integrity, or flood routing capacity.
17. “Height” means the vertical distance from the lowest elevation of the outside limit of the barrier at its intersection with the natural ground surface to the spillway crest elevation. For the purpose of determining jurisdictional status, the lowest elevation of the outside limit of the barrier may be the outlet pipe invert elevation if the outlet is constructed below natural ground.
18. “Impound” means to cause water or a liquid to be confined within a reservoir and held with no discharge.
19. “Incremental adverse consequences” means under the same loading conditions, the additional adverse consequences such as economic, intangible, lifeline, or human losses, that would occur due to the failure or improper operation of the dam over those that would have occurred without failure or improper operation of the dam.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

20. "Inflow design flood" or "IDF" means the reservoir flood inflow magnitude selected on the basis of size and hazard potential classification for emergency spillway design requirements of a dam.
21. "Intangible losses" means incremental adverse consequences to property that are not economic in nature, including property related to social, cultural, unique, or resource-based values, including the loss of irreplaceable and unique historic and cultural features; long-lasting pollution of land or water; or long-lasting or permanent changes to the ecology, including fish and endangered species habitat identified and evaluated by a public natural resource management or protection agency.
22. "Jurisdictional dam" means a barrier that meets the definition of a dam prescribed in A.R.S. § 45-1201 that is not exempted by R12-15-1203 over which the Department of Water Resources exercises jurisdiction.
23. "Levee" means an embankment of earth, concrete, or other material used to prevent a watercourse from spreading laterally or overflowing its banks. A levee is not used to impound water.
24. "License" means license of final approval issued by the Director upon completion or enlargement of a dam under A.R.S. § 45-1209.
25. "Lifeline losses" mean disruption of essential services such as water, power, gas, telephone, or emergency medical services.
26. "Liquid-borne material" means mine tailings or other milled ore products transported in a slurry to a storage impoundment.
27. "Maximum credible earthquake" means the most severe earthquake that is believed to be possible at a point on the basis of geologic and seismological evidence.
28. "Maximum water surface" means the maximum elevation of the reservoir water level attained during routing of the inflow design flood.
29. "Natural ground surface" means the undisturbed ground surface before excavation or filling, or the undisturbed bed of the stream or river.
30. "Outlet works" means a closed conduit under or through a dam or through an abutment for the controlled discharge of the contents normally impounded by a dam and reservoir. The outlet works include the inlet and outlet structures appurtenant to the conduit. Outlet works may be controlled or uncontrolled.
31. "Probable" means likely to occur, reasonably expected, and realistic.
32. "Probable maximum flood" or "PMF" means the flood runoff expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the region, including rain and snow where applicable. 1/2 PMF is that flood represented by the flood hydrograph with ordinates equal to 1/2 the corresponding ordinates of the PMF hydrograph.
33. "Probable maximum precipitation" means the greatest depth of precipitation for a given duration that is theoretically physically possible over a particular size storm area at a particular geographical location at a particular time of year.
34. "Reservoir" means any basin that contains or is capable of containing water or other liquids impounded by a dam.
35. "Residual freeboard" means the vertical distance between the highest water surface elevation during the inflow design flood and the lowest point at the top of the dam.
36. "Restricted storage" means a condition placed on a license by the Director to reduce the storage level of a reservoir because of a safety deficiency.
37. "Saddle dike or saddle dam" means any dam constructed in a topographically low area on the perimeter of a reservoir, required to contain the reservoir at the highest water surface elevation.
38. "Safe" means that a dam has sufficient structural integrity and flood routing capacity to make failure of the dam unlikely.
39. "Safe storage level" means the maximum reservoir water surface elevation at which the Director determines it is safe to impound water or other liquids in the reservoir.
40. "Safety deficiency" means a condition at a dam that impairs or adversely affects the safe operation of the dam.
41. "Safety inspection" means an investigation by an engineer or a person under the direction of an engineer to assess the safety of a dam and determine the safe storage level for a reservoir, which includes review of design reports, construction documents, and previous safety inspection reports of the dam, spillways, outlet facilities, seepage control and measurement systems, and permanent monument or monitoring installations.
42. "Spillway crest" means the highest elevation of the floor of the spillway along a centerline profile through the spillway.
43. "Storage capacity" means the maximum volume of water, sediment, or debris that can be impounded in the reservoir with no discharge of water, including the situation where an uncontrolled outlet becomes plugged. The storage capacity is reached when the water level is at the crest of the emergency spillway, or at the top of permanently mounted emergency spillway gates in the closed position. Storage capacity excludes dead storage below the natural ground surface.
44. "Surcharge storage" means the additional water storage volume between the emergency spillway crest or closed gates, and the top of the dam.
45. "Total freeboard" means the vertical distance between the emergency spillway crest and the top of the dam.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

46. “Unsafe” means that safety deficiencies in a dam or spillway could result in failure of the dam with subsequent loss of human life or significant property damage.

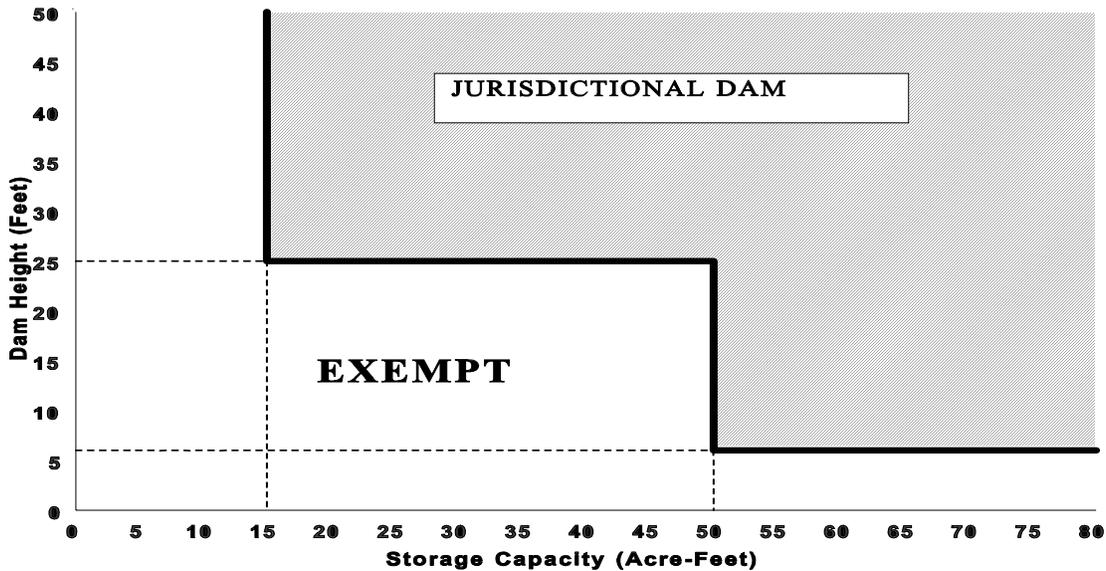
**R12-15-1203. Application Procedure Exempt Structures**

- A.** ~~An application for the construction of a new dam or enlargement, repair, alteration, or removal of an existing dam shall be prepared in duplicate and sent to the State Engineer on forms furnished by the State Engineer.~~
- B.** ~~The application shall include at least the following information:~~
- ~~1. One complete set of plans and specifications prepared by a registered professional engineer (or U.S. Soil Conservation Service engineer).~~
  - ~~2. Geotechnical engineering data including the results of foundation and materials exploration.~~
  - ~~3. Engineering design data including basis assumptions as to loads and limiting stresses and as to methods of analyses for all structures, including the dam.~~
  - ~~4. Hydraulic engineering data used in determining capacity of spillways and outlet works and hydrologic data used in deriving required spillway capacity.~~
- C.** ~~Upon completion of the project, the total cost shall be tabulated and the fee recomputed in accordance with the law. If the recomputed fee exceeds the fee paid with the application then the owner shall pay the difference between the fee already paid and the recomputed fee.~~
- D.** ~~Plans for the proposed work shall be filed in the form of paper prints. Notification of any changes required by the State Engineer will be given to the applicant. Thereafter, the drawings designated for approval by the State Engineer shall be submitted in triplicate together with two sets of specifications. After approval by the State Engineer one set of signed prints and approved application shall be returned to the applicant, one set of the drawings shall be retained for the permanent state records of the State Engineer and the third set shall be used for construction.~~

The following structures are exempt from regulation by the Department:

1. Any artificial barrier identified as exempt on Table 1 and defined as follows:
  - a. Less than 6 feet in height, regardless of storage capacity.
  - b. Between 6 and 25 feet in height with a storage capacity of less than 50 acre-feet.
  - c. Greater than 25 feet in height with 15 acre-feet or less of storage capacity.
2. A dam owned by the federal government. A dam designed by the federal government for any non-federal entity or person that will subsequently be owned or operated by a person or entity defined as an owner in A.R.S. § 45-1201 is subject to jurisdiction, beginning with design and construction of the dam.
3. A dam owned or operated by an agency or instrumentality of the federal government, if a dam safety program at least as stringent as this Article is applicable to and enforced against the agency or instrumentality.
4. A transportation structure such as a highway, road, or railroad fill that exists solely for transportation purposes. A transportation structure designed, constructed, or modified with the intention of impounding water on an intermittent or permanent basis and meeting the definition of dam in A.R.S. § 45-1201 is subject to jurisdiction.
5. A levee constructed adjacent to or along a watercourse, primarily to control floodwater.
6. A self-supporting concrete or steel water storage tank.
7. An impoundment for the purpose of storing liquid-borne material.
8. A release-contained barrier as defined by A.R.S. § 45-1201(5).

**Table 1. Exempt Structures**



**R12-15-1204. Final Inspection and License of Approval Provision for Guidelines**

- A.** Upon completion of construction, the State Water Engineer shall be notified in writing and shall finally inspect the work as soon as practicable.
- B.** After final inspection by a field engineer, the applicant is required to file the following:
  - 1. Affidavit of cost of construction. Attach breakdown of costs, including engineering.
  - 2. Additional fee if final cost exceeds estimated cost, pursuant to Arizona Revised Statutes.
  - 3. As-constructed plans, in the form of paper prints.
- C.** A license of approval shall be issued by the State Engineer after payment of all fees and upon a finding that the dam and reservoir are safe to impound water. No water shall be stored nor shall the reservoir be used without written permission of the State Engineer, pending issuance of a license of approval.

The Department may develop and adopt substantive policy statements that serve as dam safety guidelines to aid a dam owner or engineer in complying with this Article. The Department recommends that dam owners and engineers consult design guidelines published by agencies of the federal government, including the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, and the Federal Energy Regulatory Commission, for the design of concrete, roller compacted concrete, stone masonry, timber, inflatable rubber, and mechanically-stabilized earth dams. The Director may require that other criteria be used or revise any of the specific criteria for the purpose of dam safety. An owner shall obtain advance approval by the Director of design criteria.

**R12-15-1205. Plans and Specifications General Responsibilities**

- A.** Engineering drawings shall be in sizes ranging from 22 inches by 36 inches to 28 inches by 42 inches. Letter-size drawings are not permitted. Drawings shall be prepared on conventional drawing material such that clear, legible prints can be obtained. Submittal of blue line or black line prints for final approval and signature will be satisfactory. In preparing the drawings, each sheet shall contain, in addition to the normal title block in the lower right hand corner, space approximately 4" x 5" somewhere in proximity to the lower right hand corner for application of the State Engineer signature block.
- B.** The minimum requirements of maps and drawings for small dams consist of the following:
  - 1. Location map of the dam and the drainage basin above the structure.
  - 2. A topographic map of the dam, spillway, outlet works and the reservoir. The scale should be large enough to accurately locate the dam and appurtenances and to indicate cut and fill lines. Elevations should be to a real datum base, rather than an assumed elevation. Contour intervals should be compatible with height and size of the dam and its appurtenances. An area capacity curve of the reservoir can be shown on this sheet.
  - 3. Profile and section of the dam. The profile of the dam may be drawn to different horizontal and vertical scales. However, the maximum section of the dam should be drawn to a true scale. For a small dam the outlet conduit can be shown on the maximum section if this is typical of the proposed construction.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

4. Details of the outlet works. This should include the intake structure, the gate system, conduit details, the trashrack, and the downstream outlet structure. Details should be sufficiently complete to accurately lay out the structure and build it. Schematic drawings are not acceptable.
  5. Plan, profile, and control section of the spillway. This will also include details of any concrete work that may be contemplated. A complex control structure, a concrete chute, or an energy dissipating device for a terminal structure will require additional design details.
- C.** Drawings required for technical review of a major structure cannot be listed in detail because each dam is different. The following maps and drawings are required for the typical large structure:
1. Drainage basin above the proposed dam.
  2. Location map for all foundation drill holes, auger holes, test pits, trenches, and borrow areas. Also, bench marks with elevations, reference points, permanent ties should be shown. These may be shown on a reservoir map.
  3. Log of foundation drill holes and auger holes.
  4. Topographic map of the dam site.
  5. A topographic map of the reservoir, with area and capacity curves.
  6. Plan, profile and sections of the dam, all at natural scales. Camber, crest details, interior drains, and zone details should be included.
  7. Foundation plan showing excavation with proposed grout and drain holes.
  8. Outlet works showing plan, profile, sections, and details.
  9. Spillway showing plan, profile, sections and details.
  10. Details of diversion scheme if applicable.
- D.** If there is question as to whether a dam is considered a small dam or a large dam, the owner may present any information he deems pertinent to the State Engineer and the State Engineer will then decide which category applied.
- E.** Specifications concerning the proposed method of construction shall be filed in duplicate with the application. The specifications shall include a detailed description of the work to be performed and a statement of the requirements for the various types of materials that will enter into the permanent construction, including, but not limited to, foundation preparation, placement of materials and concrete quality control. Also any special techniques should be carefully described.
- F.** If not included in the specifications, the construction schedule and a statement of the sequence of construction operations shall be filed in duplicate with and form a part of the application.
- A.** Each owner is responsible for the safe design, operation, and maintenance of a dam. The owner shall operate, maintain, and regularly inspect a dam so that it does not constitute a danger to human life or property. The owner of a high or significant hazard potential dam shall provide timely warning to the Department and all other persons listed in the emergency action plan of problems at the dam. The owner shall develop and maintain effective emergency action plans and coordinate those plans with local officials as prescribed in R12-15-1221.
- B.** The owner shall conduct frequent observation of the dam, as prescribed in the emergency action plan and as follows:
1. The owner shall increase the frequency of observation when the reservoir is full, during heavy rains or flooding, and following an earthquake.
  2. The owner shall report to the Director any condition that threatens the safety of the dam as prescribed in R12-15-1224(A). The owner shall make the report as soon as possible, but not later than 12 hours after discovery of the conditions.
  3. If dam failure appears imminent, the owner shall notify the county sheriff or other emergency official immediately.
  4. The owner is responsible for the safety of the dam and shall take action to lower the reservoir if it appears that the dam has weakened or is in danger of failing.
- C.** The owner of a dam shall install, maintain, and monitor instrumentation to evaluate the performance of the dam. The Director shall require site-specific instrumentation that the Director deems necessary for monitoring the safety of the dam when failure may endanger human life and property. Conditions that may require monitoring include land subsidence, earth fissures, embankment cracking, phreatic surface, seepage, and embankment movements.
- D.** The owner shall perform timely maintenance and ordinary repair of a dam. The owner shall implement an annual plan to inspect the dam and accomplish the maintenance and ordinary repairs necessary to protect human life and property.
- E.** If a change of ownership of a dam occurs, the new owner shall notify the Department within 15 days after the date of the transaction and provide the mailing address and telephone number where the new owner can be contacted. Within 90 days after the date of the transaction, the new owner shall provide the name and telephone number of the individual or individuals who are responsible for operating and maintaining the dam.

**R12-15-1206. Construction Control Classification of Dams**

- A.** The owner is responsible for safety during and after completion of any construction of a new dam, enlargement, repair, alteration, or removal of an existing dam, and is responsible for inspections and completion of the work in accordance with the plans and specifications approved by the State Engineer.
- B.** The State Engineer shall determine that proper construction control is being exercised by the owner or the owner's engineer and any unsatisfactory condition shall be remedied by the owner or his engineer with the contractor.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

- ~~C.~~ The foundation of the dam shall be inspected by the State Engineer or his designee. The foundation shall not be covered over prior to such inspection and written approval of the foundation by the State Engineer or his designee. Inspection for the foundation for the outlet and spillway structures is also required and written approval of the State Engineer or his designee is required before covering over these foundations.
- ~~D.~~ The State Engineer and his designee shall have access to the job for purposes of inspecting all phases of the construction, including, but not limited to, mechanical installations, concrete work, placement methods and strength test records.
- ~~E.~~ Any deviations from the approved plans and specifications must be approved in writing by the State Engineer or his designee before proceeding therewith. Any problems encountered during construction which required any deviation from the plans and specifications approved by the State Engineer shall be immediately reported to the State Engineer.
- A.** Size Classification. Dams are classified by size as small, intermediate, or large. Size is determined with reference to Table 2. An owner or engineer shall determine size by storage capacity or height, whichever results in the larger size.
- B.** Hazard Potential Classification
1. The Department shall base hazard potential classification on an evaluation of the probable present and future incremental adverse consequences that would result from the release of water or stored contents due to failure or improper operation of the dam or appurtenances, regardless of the condition of the dam. The evaluation shall include land use zoning and development projected for the affected area over the 10 year period following classification of the dam. The Department considers all of the following factors in hazard potential classification: probable loss of human life, economic and lifeline losses, and intangible losses identified and evaluated by a public resource management or protection agency.
    - a. The Department bases the probable incremental loss of human life determination primarily on the number of permanent structures for human habitation that would be impacted in the event of failure or improper operation of a dam. The Department considers loss of human life unlikely if:
      - i. Persons are only temporarily in the potential inundation area;
      - ii. There are no residences or overnight campsites; and
      - iii. The owner has control of access to the potential inundation area and provides an emergency action plan with a process for warning in the event of a dam failure or improper operation of a dam.
    - b. The Department bases the probable economic, lifeline, and intangible loss determinations on the property losses, interruptions of services, and intangible losses that would be likely to result from failure or improper operation of a dam.
  2. The 4 hazard potential classification levels are very low, low, significant, and high, listed in order of increasing probable adverse incremental consequences, as prescribed in Table 3. The Director shall classify intangible losses by considering the common or unique nature of features or habitats and temporary or permanent nature of changes.
    - a. Very Low Hazard Potential. Failure or improper operation of a dam would be unlikely to result in loss of human life and would produce no lifeline losses and very low economic and intangible losses. Losses would be limited to the 100 year floodplain or property owned or controlled by the dam owner under long-term lease. The Department considers loss of life unlikely because there are no residences or overnight camp sites.
    - b. Low Hazard Potential. Failure or improper operation of a dam would be unlikely to result in loss of human life, but would produce low economic and intangible losses, and result in no disruption of lifeline services that require more than cosmetic repair. Property losses would be limited to rural or agricultural property, including equipment, and isolated buildings.
    - c. Significant Hazard Potential. Failure or improper operation of a dam would be unlikely to result in loss of human life but may cause significant or high economic loss, intangible damage requiring major mitigation, and disruption or impact on lifeline facilities. Property losses would occur in a predominantly rural or agricultural area with a transient population but significant infrastructure.
    - d. High Hazard Potential. Failure or improper operation of a dam would be likely to cause loss of human life because of residential, commercial, or industrial development. Intangible losses may be major and potentially impossible to mitigate, critical lifeline services may be significantly disrupted, and property losses may be extensive.
  3. An applicant shall demonstrate the hazard potential classification of a dam before filing an application to construct. The Department shall review the applicant's demonstration early in the design process at pre-application meetings prescribed in R12-15-1207(D).
  4. The Department shall review the hazard potential classification of each dam during each subsequent dam safety inspection and revise the classification in accordance with current conditions.

Arizona Administrative Register  
Notices of Final Rulemaking

**EXHIBIT A REPEALED**

**STATE OF ARIZONA  
OFFICE OF THE STATE WATER ENGINEER  
SUPERVISION OF SAFETY OF DAMS**

Application No. \_\_\_\_\_ Filed \_\_\_\_\_  
(APPLICANT SHALL NOT FILL IN ABOVE BLANKS)

**APPLICATION FOR THE APPROVAL OF THE PLANS AND SPECIFICATIONS FOR THE  
CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION OR REMOVAL OF A DAM AND  
RESERVOIR**

(This application involves in no way the right to appropriate water. To secure the right to appropriate water, application has to be made to the State Lands Department, Division of Water Rights on forms which will be furnished upon request.)

\_\_\_\_\_ This application is for the \_\_\_\_\_ of the \_\_\_\_\_ Dam.  
\_\_\_\_\_ (CONSTRUCTION REPAIR, ALTERATION, ETC.)

**LOCATION OF DAM**

This dam is in \_\_\_\_\_ County, in the \_\_\_\_\_ 1/4, Sec. \_\_\_\_\_, Tp. \_\_\_\_\_

R. \_\_\_\_\_, G&SR, B&M, and is located on \_\_\_\_\_  
\_\_\_\_\_ (CREEK, RIVER OR WATERSHED)

tributary to \_\_\_\_\_.

\_\_\_\_\_ CREEK OR RIVER  
\_\_\_\_\_ OWNER

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_ STREET AND NUMBER, OR P.O. BOX

\_\_\_\_\_ CITY STATE ZIP TELEPHONE

If this application is for construction of a new dam, complete all lines (1 thru 21) except Item 15. For alteration, repair, enlargement or removal of a dam, complete Items 15 thru 21, and those other items where a change is being made.

**DESCRIPTION OF DAM AND RESERVOIR**

1. Type of dam \_\_\_\_\_  
\_\_\_\_\_ (EARTH, ROCK, CONCRETE GRAVITY, CONCRETE ARCH)

2. Crest length \_\_\_\_\_ ft. Crest width \_\_\_\_\_ ft.

3. Slope, upstream \_\_\_\_\_ Slope, downstream \_\_\_\_\_

4. Dam crest elevation \_\_\_\_\_ ft. Spillway crest elevation \_\_\_\_\_

5. Dam height is \_\_\_\_\_ feet (Measured from original ground level at the downstream toe to the spillway crest.)

6. Volume of the material in dam \_\_\_\_\_ cubic yards.

7. Water surface elevation is \_\_\_\_\_ feet at the time of maximum spillway discharge.

8. Spillway (type, sizes and capacity) \_\_\_\_\_

9. Outlet (type, size and capacity) \_\_\_\_\_

10. Reservoir capacity at spillway crest elevation is \_\_\_\_\_ acre feet.

11. Reservoir surface area at spillway crest elevation is \_\_\_\_\_ acres.  
\_\_\_\_\_ (See Reverse Side)

**HYDROLOGIC DATA**

12. Maximum Recorded Rainfall \_\_\_\_\_ inches in \_\_\_\_\_ hours.

\_\_\_\_\_ Date \_\_\_\_\_ Location \_\_\_\_\_

**Arizona Administrative Register**  
**Notices of Final Rulemaking**

13. Maximum Recorded Streamflow \_\_\_\_\_ cubic feet per second.

Date \_\_\_\_\_ Location \_\_\_\_\_

14. Drainage Area \_\_\_\_\_ square miles.

**GENERAL INFORMATION**

15. Description of Work (repair, alteration, etc.) \_\_\_\_\_

16. Use of Stored Water \_\_\_\_\_

17. What provisions to divert flood flows during construction? \_\_\_\_\_

18. Construction will begin \_\_\_\_\_ Estimated Completion \_\_\_\_\_  
(DATE) (DATE)

19. Estimated cost of dam, reservoir and appurtenances: \$ \_\_\_\_\_

20. Fees accompanying this application: \$ \_\_\_\_\_

21. Investigations, plainsman specifications prepared by \_\_\_\_\_

\_\_\_\_\_  
Signed: \_\_\_\_\_  
Address: \_\_\_\_\_  
Legal Capacity if other than owner: \_\_\_\_\_  
\_\_\_\_\_  
Date: \_\_\_\_\_

APPROVAL OF APPLICATION No. \_\_\_\_\_ INCLUDING THE PLANS AND SPECIFICATIONS.

This is to certify that Application No. \_\_\_\_\_, including the plans and specifications for \_\_\_\_\_ Dam and Reservoir has been examined and the same hereby approved, subject to the following terms and limitations:

- \_\_\_\_\_ 1. Construction work shall be started within one (1) year from date.
- \_\_\_\_\_ 2. No foundations or abutments shall be covered by the material of the dam until the State Engineer has been given an opportunity to inspect and approve the same.

\_\_\_\_\_ Dated this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

STATE WATER ENGINEER

By Chief, Supervision of Safety of Dams

**Table 2. Size Classification**

<u>Category</u>	<u>Storage Capacity (acre-feet)</u>	<u>Height (feet)</u>
Small	50 to 1,000	25 to 40
Intermediate	greater than 1,000 and not exceeding 50,000	higher than 40 and not exceeding 100
Large	greater than 50,000	higher than 100

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

**Table 3. Downstream Hazard Potential Classification**

<u>Hazard Potential Classification</u>	<u>Probable Loss of Human Life</u>	<u>Probable Economic, Lifeline, and Intangible Losses</u>
<u>Very Low</u>	<u>None expected</u>	<u>Economic and lifeline losses limited to owner's property or 100-year floodplain. Very low intangible losses identified.</u>
<u>Low</u>	<u>None expected</u>	<u>Low</u>
<u>Significant</u>	<u>None expected</u>	<u>Low to high</u>
<u>High</u>	<u>Probable - One or more expected</u>	<u>Low to high (not necessary for this classification)</u>

**R12-15-1207. Application Process**

- A.** An applicant shall obtain written approval from the Director before constructing, reconstructing, repairing, enlarging, removing, altering, or breaching a dam. Application requirements differ according to the hazard potential of the dam.
1. To construct, reconstruct, repair, enlarge, or alter a high or significant hazard potential dam, the applicant shall comply with R12-15-1208.
  2. To breach or remove a high or significant hazard potential dam, the applicant shall comply with R12-15-1209.
  3. To construct, reconstruct, repair, enlarge, alter, breach, or remove a low hazard potential dam, the applicant shall comply with R12-15-1210.
  4. To construct, reconstruct, repair, enlarge, alter, breach, or remove a very low hazard potential dam, the applicant shall comply with R12-15-1211.
- B.** An application shall not be filed with the Director under the following circumstances:
1. The dam is exempt under R12-15-1203;
  2. A dam owner starts repairs to an existing dam that are necessary to safeguard human life or property and the Director is notified without delay;
  3. The owner performs general maintenance or ordinary repairs as prescribed in R12-15-1217(A) or (B); or
  4. Breach, removal, or reduction of a very low hazard dam as prescribed in R12-15-1211(C).
- C.** An applicant is not required to comply with a requirement in this Article if the Director finds that, considering the site characteristics and the proposed design, the requirement is unduly burdensome or expensive and is not necessary to protect human life or property. The Director shall consider the size, hazard potential classification, physical site conditions, and applicability of a requirement to a proposed dam. The Director shall state in writing the reason or reasons the applicant is not required to comply with a requirement.
- D.** An applicant shall schedule pre-application conferences with the Department to discuss the requirements of this Article and to resolve issues essential to the design of a dam while the design is in preliminary stages. The Director shall view the dam site during the pre-application process. The following are examples of issues for pre-application conferences: the hazard potential classification, the approximate inflow design flood, the basic design concepts, and any requirements that may be found by the Director to be unduly burdensome or expensive and not necessary to protect human life or safety. In addition, the applicant may submit preliminary design calculations to the Department for review and comment. The Department shall comment as soon as practicable, depending on the size of the submittal and the current workload.
- E.** The Department shall review applications as follows:
1. Applications will be received by appointment. During this meeting the Department shall make a brief review of the application to determine that the application contains each of the items required by R12-15-1208, R12-15-1209, R12-15-1210, or R12-15-1211.
  2. Following receipt of an application submitted under R12-15-1208, R12-15-1209, R12-15-1210, or R12-15-1211, the Director shall complete an administrative review as prescribed in R12-15-401(1) and notify the applicant in writing whether the application is administratively complete. If the application is not administratively complete, the notification shall include a list of additional information that is required to complete the application.
  3. After finding the application submitted under R12-15-1208, R12-15-1209, R12-15-1210, or R12-15-1211 administratively complete, the Director shall complete a substantive review as prescribed in R12-15-401(3) and notify the applicant in writing of the Director's approval or disapproval. If during this review period, the Director determines that there are defects in the application that would impact human life and property, a written notice of the defects shall be sent to the applicant.
  4. An applicant may request in writing that the Director expedite the review of an application by employing an expert consultant on a contract basis under A.R.S. § 45-104(D). The Director shall establish on-call contracts with expert consultants to facilitate the process of expediting review. The Director may retain a consultant to review all or a portion of the application as necessary to expedite the process in response to an owner's request or to comply with time-frame rules. Before conducting the review, the consultant shall provide the Director and the applicant with a proposed

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

time schedule and cost estimate. If the applicant agrees to the consultant's proposal for an expedited review of an application and the Director employs the consultant, the applicant shall pay to the Department the cost of the consultant's services in addition to the application fees. The Director retains the authority to review and approve, disapprove, or modify the findings and recommendations of the consultant.

5. The Director shall not approve an application in less than 10 days from the date of receipt.
  6. If the Director disapproves the application, the Director shall provide the applicant with a statement of the Director's objections.
  7. If the Director approves an application, the applicant shall submit in triplicate revised drawings and specifications that incorporate any required changes.
    - a. The Director shall return to the applicant 1 set of final construction drawings and specifications with the Department's approval stamp to be retained onsite during construction;
    - b. The Director shall retain for permanent state record 1 set of final construction drawings and specifications with the Department's approval stamp; and
    - c. The Director shall retain for use by the Department during construction the 3rd set of final construction drawings and specifications with the Department's approval stamp.
  8. The Director shall impose conditions and limitations that the Director deems necessary to safeguard human life and property. Examples of the conditions of approval include but are not limited to:
    - a. The applicant shall not cover the foundation or abutment with the material of the dam until the Department has been given notice and a reasonable time to inspect and approve them.
    - b. The applicant shall start construction within 1 year from the date of approval.
    - c. The applicant shall maintain a safe storage level for an existing dam being reconstructed, repaired, enlarged, altered, or breached.
- F.** An approval to construct a new dam or repair, enlarge, alter, breach, or remove an existing dam is valid for 1 year.
1. If construction does not begin within 1 year, the approval is void.
  2. Upon written request and good cause shown by the owner, the time for commencing construction may be extended. An applicant shall not start construction before the Director reviews the application for changes and grants approval.

**R12-15-1208. Application to Construct, Reconstruct, Repair, Enlarge, or Alter a High or Significant Hazard Potential Dam**

- A.** An application package to construct, reconstruct, repair, enlarge, or alter a high or significant hazard potential dam shall include the following prepared by or under the supervision of an engineer as defined in R12-15-1202(11).
1. A completed application filed in duplicate on forms provided by the Director.
  2. A design information summary or checklist of items prepared in duplicate on forms provided by the Director.
  3. An initial application fee based on the total estimated project cost and computed in accordance with A.R.S. § 45-1204 and R12-15-151(B)(11).
  4. A detailed estimate of project costs. Project costs are all costs associated with construction of the dam and appurtenant works including preliminary investigations and surveys, engineering design, supervision of construction, and any other engineering costs.
  5. Two complete sets of construction drawings as prescribed in R12-15-1215(1).
  6. Two complete sets of construction specifications as prescribed in R12-15-1215(2).
  7. An engineering design report that includes information needed to evaluate all aspects of the design of the dam and appurtenances, including references with page numbers to support any assumptions used in the design, as prescribed in R12-15-1215(3). The engineering design report shall recommend a safe storage level for existing dams being reconstructed, repaired, enlarged, or altered.
  8. A construction quality assurance plan describing all aspects of construction supervision.
  9. A description of the use for the impounded or diverted water, proof of a right to appropriate, and a permit to store water as prescribed in A.R.S. §§ 45-152 and 45-161.
  10. A long-term budget plan and evidence of financing, prepared using customary accounting principles, that demonstrate that the applicant has the financial capability to construct, operate, and maintain the dam in a safe manner. If the applicant does not have evidence that can be verified by an independent audit of the financial capability to construct, operate, and maintain the dam in a safe manner, the Director may require a performance bond for the entire cost of the proposed construction work.
- B.** The following may be submitted with the application or during construction.
1. An emergency action plan as prescribed in R12-15-1221.
  2. An operation and maintenance plan to accomplish the annual maintenance.
  3. An instrumentation plan regarding instruments that evaluate the performance of the dam.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**R12-15-1209. Application to Breach or Remove a High or Significant Hazard Potential Dam**

- A.** An applicant shall excavate the dam down to the level of the natural ground at the maximum section. Upon approval of the Director, additional breaches may be made. This provision shall not be construed to require more than total removal of the dam regardless of the flood magnitude. The breach or breaches shall be of sufficient width to pass the greater of:
  - 1. The 100 year flood at a depth of less than 5 feet, or
  - 2. The 100 year flood at a normal flood depth of not more than 2 feet at a distance of 2,000 feet downstream of the dam.
- B.** The sides of each breach shall be excavated to a slope ratio that is stable and not steeper than 1 horizontal to 1 vertical.
- C.** Each breach shall be designed to prevent silt that has previously been deposited on the reservoir bottom and the excavated material from the breach from washing downstream.
- D.** Before breaching the dam, the reservoir shall be emptied in a controlled manner that will not endanger lives or damage downstream property. The applicant shall obtain approval from the Director for the method of breaching or removal.
- E.** An application package to breach or remove a high or significant hazard potential dam shall include the following prepared by or under the supervision of an engineer as defined in R12-15-1202(11).
  - 1. The construction drawing or drawings for the breach or removal of a dam, including the location, dimensions, and lowest elevation of each breach.
  - 2. A long-term budget plan and evidence of financing, prepared using customary accounting principles, that demonstrate that the applicant has the financial capability to breach or remove the dam in a safe manner. If the applicant does not have evidence that can be verified by an independent audit of the financial capability to breach or remove the dam in a safe manner, the Director may require a performance bond for the entire cost of the proposed construction work.
  - 3. A construction quality assurance plan describing all aspects of construction supervision.
- F.** Reduction of a high or significant downstream hazard potential dam to nonjurisdictional size may be approved by letter under the following circumstances:
  - 1. The owner shall submit a completed application form and construction drawings for the reduction and the appropriate specifications, prepared by or under the supervision of an engineer as defined in R12-15-1202(11).
  - 2. The construction drawings and specifications shall contain sufficient detail to enable a contractor to bid on and complete the project.
  - 3. The plans shall comply with all requirements of this Section except that the breach is not required to be to natural ground.
  - 4. Upon completion of an alteration to nonjurisdictional size, the engineer shall file as constructed drawings and specifications with the Department.

**R12-15-1210. Application to Construct, Reconstruct, Repair, Enlarge, Alter, Breach, or Remove a Low Hazard Potential Dam**

- A.** An application package to construct, reconstruct, repair, enlarge, or alter a low hazard potential dam shall include the following prepared by or under the supervision of an engineer as defined in R12-15-1202(11).
  - 1. A completed application filed in duplicate on forms provided by the Director.
  - 2. An initial application fee based on the total estimated project cost, computed in accordance with A.R.S. § 45-1204 and R12-15-151(B)(11).
  - 3. A detailed estimate of project costs. Project costs are all costs associated with construction of the dam and appurtenant works, including preliminary investigations and surveys, engineering design, supervision of construction, and any other engineering costs.
  - 4. The seal and signature of the responsible engineer in accordance with A.A.C. R4-30-304.
  - 5. A statement by the responsible engineer that classifies the dam as low hazard in accordance with R12-15-1206(B). The responsible engineer shall submit a map of the area that would be inundated by failure or improper operation of the dam. The responsible engineer shall demonstrate that failure or improper operation of the dam would be unlikely to result in:
    - a. Loss of human life. The demonstration may be based on an emergency action plan for persons who may be in the area of inundation;
    - b. Significant incremental adverse consequences; or
    - c. Significant intangible losses, as defined in R12-15-1202(21) and identified and evaluated by a public natural resource management or protection agency.
  - 6. Two complete sets of construction drawings as prescribed by R12-15-1215(1).
  - 7. Two complete sets of construction specifications as prescribed by R12-15-1215(2).
  - 8. An engineering design report that includes information needed to evaluate all aspects of the design of the dam and appurtenances, including references with page numbers to support any assumptions used in the design, as prescribed in R12-15-1215(3).
  - 9. A construction quality assurance plan clearly describing all aspects of construction supervision.
  - 10. A long-term budget plan and evidence of financing, prepared using customary accounting principles, that demonstrate that the applicant has the financial capability to construct, operate, and maintain the dam in a safe manner. If the

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

applicant does not have evidence that can be verified by an independent audit of the financial capability to construct, operate, and maintain the dam in a safe manner, the Director may require a performance bond for the entire cost of the proposed construction work.

- B.** An application package for the breach or removal of a low hazard potential dam shall include the following.
1. A completed application filed in duplicate on forms provided by the Director that contains the following information:
    - a. The name and address of the owner of the dam or the agent of the owner.
    - b. A description of the proposed removal.
    - c. The proposed time for beginning and completing the removal.
  2. An initial application fee based on the total estimated project cost and computed in accordance with A.R.S. § 45-1204 and R12-15-151(B)(11).
  3. A statement by the responsible engineer demonstrating both of the following:
    - a. That the dam will be excavated to the level of natural ground at the maximum section; and
    - b. That the breach or breaches will be of sufficient width to pass the greater of:
      - i. The 100 year flood at a depth of less than 5 feet, or
      - ii. The 100 year flood at a normal flood depth of not more than 2 feet at a distance of 2,000 feet downstream of the dam.
      - iii. Subsection (b) shall not be construed to require more than a total removal of the dam regardless of flood magnitude.
    - c. That the sides of the breach will be excavated to a slope ratio that is stable and not steeper than 1 horizontal to 1 vertical.
  4. A detailed estimate of project costs. Project costs are all costs associated with the removal of the dam and appurtenant works, including preliminary investigations and surveys, engineering design, supervision of removal, and any other engineering costs.
- C.** An applicant intending to reduce a low hazard potential dam to nonjurisdictional size shall submit a written notice to the Director at least no less than 60 days before the date that construction begins.
- D.** Within 45 days after receipt of a complete application package as prescribed by subsection (A) or (B), the Director shall either:
1. Determine that the dam falls within the low hazard potential classification; or
  2. Issue a written notice that the dam does not fall within the low hazard potential classification.
- E.** The Director's determination that the proposed dam does not fall within the low hazard classification is an appealable agency action and subject to administrative and judicial review under A.R.S. Title 41, Chapter 6, Article 10.
- F.** Upon completion of construction, the owner shall notify the Department in writing. The owner shall not use the dam or reservoir before issuance of a license unless the Director issues written approval.
- G.** Within 90 days after completing construction, reconstruction, repair, enlargement, or alteration of a low hazard potential dam, the owner shall file the following.
1. An affidavit showing the actual cost of construction, reconstruction, repair, enlargement, or alteration of the dam. The owner shall submit a detailed accounting of the costs, including all engineering costs.
  2. An additional fee or refund request computed in accordance with A.R.S. § 45-1209 and R12-15-151(B)(11), based on the actual cost of construction, reconstruction, repair, enlargement, or alteration.
  3. A brief completion report summarizing the salient features of the project, including a description of the causes for any changes or deviations from the approved application package prepared by the engineer who supervised the construction, in accordance with A.R.S. Title 32, Chapter 1. The engineer shall indicate:
    - a. That the dam has been designed and constructed in compliance with basic principles of dam construction currently being practiced in the industry;
    - b. That the dam as constructed has structural integrity and flood routing capacity consistent with its hazard potential classification; and
    - c. That the as constructed drawings and the report accurately represent the construction of the dam.
  4. As constructed drawings prepared and sealed by the engineer who supervised the construction. The owner and the engineer shall maintain a record of the drawings.
- H.** Upon receiving the Director's written approval, the owner may operate the dam and appurtenant works. Within 30 days after receipt of the information in subsection (G), the Director shall issue to the owner either a license or a notice that the dam and appurtenant works shall not be operated because the dam and appurtenant works do not qualify as low hazard or were not built according to the submitted design. The license shall include conditions of operation, including:
1. The safe storage level of the reservoir;
  2. A requirement that the dam be operated and maintained so that it does not constitute a danger to human life and property;
  3. A requirement that the conditions resulting in the low hazard classification be maintained throughout the life of the dam; and

4. A requirement that the owner demonstrate in writing the low hazard classification in the manner prescribed by subsection (A)(5) every 5 years.
- I. Within 90 days after completing removal of a low hazard potential dam, the owner shall file the following. The Director shall remove the dam from jurisdiction upon approval of the submittal.
  1. An affidavit showing the actual cost of removal of the dam. The owner shall submit a detailed accounting of the costs, including all engineering costs.
  2. An additional fee or refund request computed in accordance with A.R.S. § 45-1209 and R12-15-151(B)(11) based on the actual cost of removal.
  3. A brief completion report, including a description of the causes for any changes or deviations from the approved application package prepared by the engineer who supervised the construction, in accordance with A.R.S. Title 32, Chapter 1. The engineer shall certify that the as removed drawings and the report accurately represent the actual removal of the dam.
  4. As-removed drawings prepared and sealed by the engineer who supervised the removal. The owner and the engineer shall maintain a record of the drawings.
- J. An owner shall immediately commence repairs necessary to safeguard human life and property and prevent failure and improper operation of a low hazard potential dam. The owner shall notify the Department as soon as reasonably possible and in all cases within 10 days of commencing the required repairs.

**R12-15-1211. Application to Construct, Reconstruct, Repair, Enlarge, Alter, Breach, or Remove a Very Low Hazard Potential Dam**

- A. An application package to construct, reconstruct, repair, enlarge, or alter a very low hazard potential dam shall include the following prepared by an engineer or a person under the supervision of an engineer as defined in R12-15-1202(11).
  1. A completed application filed in duplicate on forms provided by the Director that contains the following information:
    - a. The name and address of the owner of the dam or the agent of the owner.
    - b. The location, type, size, and height of the proposed dam and appurtenant works.
    - c. The storage capacity of the reservoir associated with the proposed dam.
    - d. The proposed time for beginning and completing construction.
    - e. A description of the use for the impounded or diverted water and proof of a right to impound that water.
  2. The means, plans, and specifications by which the stream or body of water is to be dammed, by-passed, or controlled during construction.
  3. Maps, drawings, and specifications of the proposed dam.
  4. An initial application fee based on the total estimated project cost and computed in accordance with A.R.S. § 45-1204 and R12-15-151(B)(11).
  5. A detailed estimate of project costs. Project costs are all costs associated with construction of the dam and appurtenant works, including preliminary investigations and surveys, engineering design, supervision of construction, and any other engineering costs.
  6. A statement by the responsible engineer that classifies the dam as very low hazard in accordance with R12-15-1206(B). The responsible engineer shall submit a map of the area that would be inundated by failure or improper operation of the dam. The responsible engineer shall demonstrate that failure or improper operation would be unlikely to result in:
    - a. Loss of human life. The demonstration may be based on an emergency action plan for persons who may be in the area of inundation;
    - b. Significant incremental adverse consequences; or
    - c. Significant intangible losses, as defined in R12-15-1202(21) and identified and evaluated by a public natural resource management protection agency, because the dam has a size classification of either small or intermediate under R12-15-1206(A) and any release would be limited to the 100 year floodplain or property owned or controlled by the dam owner under long-term lease.
  7. The seal and signature of the responsible engineer in accordance with A.R.S. Title 32, Chapter 1.
  8. The drawings required by subsection (A)(3) shall include a plan view and maximum section of the dam; the outlet works; and the spillway plan, profile, and cross section.
  9. The specifications required by subsection (A)(3) shall include the construction materials, testing criteria, and installation techniques.
- B. The Director may make other requirements for drawings and specifications for the proposed repair or alteration of a very low hazard potential dam. In determining other requirements, the Director shall consider the size and extent of the repair or alteration, the portions of the dam that will be repaired or altered, and whether the requirements elicit a description of the proposed construction work that is adequate to allow the Director to evaluate the repair or alteration.
- C. An owner intending to breach, remove, or reduce a very low hazard potential dam to nonjurisdictional size shall submit written notice to the Director at least 60 days before the date that construction begins.
- D. After receipt of a complete application package as prescribed by subsection (A), the Director shall either:
  1. Determine that the dam falls within the very low hazard classification and approve the application in writing; or

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

2. Issue a written notice that the dam does not fall within the very low hazard classification.
- E.** The Director's determination that the proposed dam does not fall within the very low hazard classification is an appealable agency action and subject to administrative and judicial review under A.R.S. Title 41, Chapter 6, Article 10.
- F.** Upon completion of construction, the owner shall notify the Department in writing. The owner shall not use the dam and reservoir before receipt of a license unless the Director issues written approval.
- G.** Within 90 days after completion of the construction, reconstruction, repair, enlargement, or alteration of a very low hazard potential dam, the owner shall file the following:
  1. An affidavit showing the actual cost of construction, reconstruction, repair, enlargement, or alteration of the dam. The owner shall submit a detailed accounting of the costs, including all engineering costs.
  2. An additional fee or refund request computed in accordance with A.R.S. § 45-1209 and R12-15-151(B)(11) based on the actual cost of construction, reconstruction, repair, enlargement, or alteration.
  3. A brief completion report summarizing the salient features of the project, including a description of the causes for any changes or deviations from the approved application package prepared by the engineer who supervised the construction in accordance with A.R.S. Title 32, Chapter 1. The report shall include:
    - a. That the dam has been designed and constructed in compliance with basic principles of dam construction currently being practiced in the industry;
    - b. That the dam as constructed has structural integrity and flood routing capacity consistent with its hazard potential classification; and
    - c. That the as constructed drawings and the report accurately represent the construction of the dam.
  4. As constructed drawings prepared by the engineer who supervised the construction. The owner and the engineer shall maintain a record of the drawings.
- H.** Within 30 days after receipt of the information in subsection (G), the Director shall issue to the owner either a license or a notice that the dam and appurtenant works shall not be operated because the dam and appurtenant works do not qualify as very low hazard or were not built according to the submitted design. Upon receiving the Director's written approval, the owner may operate the dam and appurtenant works. The license shall include conditions of operation, including:
  1. The safe storage level of the reservoir;
  2. A requirement that the conditions resulting in the very low hazard classification be maintained throughout the life of the dam; and
  3. A requirement that the owner demonstrate in writing the very low hazard classification in the manner prescribed by subsection (A)(6) every 5 years.
- I.** An owner shall immediately commence repairs necessary to safeguard human life and property and prevent failure or improper operation of a very low hazard potential dam. The owner shall notify the Department as soon as reasonably possible and in all cases within 10 days of commencing the required repairs.
- J.** The Department may periodically inspect construction to confirm that it is proceeding according to the approved design and that proper construction quality assurance is being exercised by the owner's engineer. The owner, or the owner's engineer under the direction of the owner, shall remedy any unsatisfactory condition using the contractor.
- K.** The owner shall provide the Department access to the dam site for purposes of inspecting all phases of construction, including the foundation, embankment and concrete placement, inspection and test records, and mechanical installations.

**R12-15-1212. Construction of a High, Significant, or Low Hazard Potential Dam**

- A.** Before commencement of construction activities, the owner shall invite to a pre-construction conference all involved regulatory agencies, the prime contractor, and all subcontractors. At this meeting the Department shall identify, to the extent possible, the key construction stages at which an inspection will be made. At least 48 hours before each key construction stage identified for inspection, the owner or the owner's engineer shall provide notice to the Department.
- B.** The owner and the owner's engineer shall oversee construction of a new dam or reconstruction, repair, enlargement, alteration, breach, or removal of an existing dam. Failure to perform the work in accordance with the construction drawings and specifications approved by the Director renders the approval revocable. The owner's engineer shall exercise professional judgment independent of the contractor.
- C.** A professional engineer with proficiency in engineering and knowledge of dam technology shall supervise or direct the supervision of construction in accordance with the construction quality assurance plan.
- D.** The owner's engineer shall submit summary reports of construction activities and test results according to a schedule approved by the Department.
- E.** The owner shall immediately report to the Department any condition encountered during construction that requires a deviation from the approved plans and specifications.
- F.** The owner shall promptly submit a written request for approval of any necessary change and sufficient information to justify the proposed change. The owner shall not commence construction without the written approval of the Director unless the change is a minor change. A minor change is a change that complies with the requirements of this Article and provides equal or better safety performance.
- G.** Upon completion of construction, the owner shall notify the Department in writing. The Department shall make a final inspection. The owner shall correct any deficiencies noted during the inspection.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

**R12-15-1213. Completion Documents for a Significant or High Hazard Potential Dam**

Within 90 days after completion of the construction or removal work for a significant or high hazard potential dam and final inspection by the Department, the owner shall file the following.

1. An affidavit showing the actual cost of the construction. The owner shall submit a detailed accounting of the costs, including all engineering costs.
2. An additional fee or refund request based on the actual cost of the construction, computed in accordance with A.R.S. § 45-1209 and R12-15-151(B)(11).
3. One set of full sized as constructed drawings prepared and sealed by the engineer who supervised the construction. If changes were made during construction, the owner shall file supplemental drawings showing the dam and appurtenances as actually constructed.
4. Construction records, including grouting, materials testing, and locations and baseline readings for permanent bench marks and instrumentation, initial surveys, and readings.
5. Photographs of construction from exposure of the foundation to completion of construction.
6. A brief completion report summarizing the salient features of the project, including a description of the causes for any changes or deviations from the approved drawings and specifications that were made during the construction phase.
7. A schedule for filling the reservoir, specifying fill rates, water level elevations to be held for observation, and a schedule for inspecting and monitoring the dam. The owner shall monitor the dam monthly during the first filling.
8. An operating manual for the dam and its appurtenant structures. The operating manual shall include a process for safety inspections prescribed in R12-15-1219. The operating manual shall include schedules for surveillance activities and baseline information for any installed instrumentation as follows:
  - a. The frequency of monitoring;
  - b. The data recording format;
  - c. A graphical presentation of data; and
  - d. The person who will perform the work.

**R12-15-1214. Licensing**

**A.** Upon review and approval of the documents filed under R12-15-1213 and finding that the construction at the dam has been completed in accordance with the approved plans and specifications and finding that the dam is safe, the Director shall issue a license. The license shall specify the safe storage level for the reservoir and shall specify conditions for the safe operation of the dam. The dam and reservoir shall not be used before issuance of a license unless the Director issues written approval. Procedures for issuance of a license for low and very low hazard potential dams are prescribed in R12-15-1210(H) and R12-15-1211(H), respectively.

**B.** A new license shall be issued in the following instances:

1. Upon change of ownership of a dam.
2. Upon change of the safe storage level.
3. Upon expiration of time to appeal a notice issued under R12-15-1223(B).
4. Upon expiration of time to appeal an order issued by the Director under R12-15-1223(D).
5. Upon expiration of time to appeal an order of a court.

**R12-15-1215. Construction Drawings, Construction Specifications, and Engineering Design Report for a High, Significant, or Low Hazard Potential Dam**

The owner and engineer are responsible for complete and adequate design of a dam and for including in the application all aspects of the design pertaining to the safety of the dam.

1. Construction Drawing Requirements. The construction drawings required by R12-15-1208(5), R12-15-1209(E)(1), and R12-15-1210(A)(6) shall include the following:
  - a. The seal and signature of the responsible engineer in accordance with A.A.C. R4-30-304.
  - b. One or more topographic maps of the dam, spillway, outlet works, and reservoir on a scale large enough to accurately locate the dam and appurtenances, indicate cut and fill lines, and show the property lines and ownership status of the land. Contour intervals shall be compatible with the height and size of the dam and its appurtenances and shall show design and construction details.
  - c. A reservoir area and capacity curve that reflect area in acres and capacity in acre-feet in relation to depth of water and elevation in the reservoir. The construction drawings shall show the spillway invert and top of dam elevations. The construction drawings shall also show the reservoir volume and space functional allocations. The construction drawings may include alternate scales as required for the owner's use.
  - d. Spillway and outlet works rating curves and tables at a scale or scales that allow determination of discharge rate in cubic feet per second at both low and high flows as measured by depth of water passing over the spillway control section.
  - e. A location map showing the dam footprint and all exploration drill holes, test pits, trenches, adits, borrow areas, and bench marks with elevations, reference points, and permanent ties. This map shall use the same vertical and horizontal control as the topographic map.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

- f. Geologic information including 1 or more geologic maps, profile along the centerline, and other pertinent cross sections of the dam site, spillway or spillways, and appurtenant structures, aggregate and material sources, and reservoir area at 1 or more scales compatible with the site and geologic complexity, showing logs of exploration drill holes, test pits, trenches, and adits.
  - g. One or more plans of the dam to delineate design and construction details.
  - h. Foundation profile along the dam centerline at a true scale where the vertical scale is equal to the horizontal scale, showing the existing ground and proposed finished grade at cut and fill elevations, including anticipated geologic formations. The foundation profile shall include any proposed grout and drain holes.
  - i. Profile and a sufficient number of cross sections of the dam to delineate design and construction details. The drawings shall illustrate and show dimensions of camber, details of the top, core zone, interior filters and drains, and other zone details. The profile of the dam may be drawn to different horizontal and vertical scales if required for detail. A maximum section of the dam shall be drawn to a true scale, where the vertical scale is equal to the horizontal scale. The outlet conduit may be shown on the maximum section if this is typical of the proposed construction.
  - j. One or more dam foundation plans showing excavation grades and cut slopes with any proposed foundation preparation, grout and drain holes, and foundation dewatering requirements.
  - k. Plan, profile, and details of the outlet works, including the intake structure, the gate system, conduit, trashrack, conduit filter diaphragm, conduit concrete encasement, and the downstream outlet structure. The drawings shall include all connection and structural design details.
  - l. Plan, profile, control section, and cross sections of the spillway, including details of any foundation preparation, grouting, or concrete work that is planned. A complex control structure, a concrete chute, or an energy dissipating device for a terminal structure shall include both hydraulic and structural design details.
  - m. Hydrologic data, drainage area and flood routing, and diversion criteria.
2. Construction Specification Requirements. The construction specifications required by R12-15-1208(6) and R12-15-1210(A)(7) shall include the following:
- a. The seal and signature of the responsible engineer in accordance with A.A.C. R4-30-304.
  - b. The statement that the construction drawings and specifications shall not be materially changed without the prior written approval of the Director.
  - c. A detailed description of the work to be performed and a statement of the requirements for the various types of materials and installation techniques that will enter into the permanent construction.
  - d. The statement that construction shall not be considered complete until the Director has approved the construction in writing.
  - e. The statement that the owner's engineer shall control the quality of construction.
  - f. The following construction information:
    - i. All earth and rock material descriptions, placement criteria, and construction requirements for all elements of the dam and related structures.
    - ii. All concrete, grout, and shotcrete material and mix descriptions, placement and consolidation criteria, temperature controls, and construction requirements for all elements of the dam and related structures.
    - iii. Material criteria and material testing, cleaning, and treatment. If foundation or curtain grouting is required, the specifications shall describe the type of grout, grouting method, special equipment necessary, recording during grouting, and foundation monitoring to avoid disturbance from grouting.
    - iv. All materials testing that will be performed by the contractor for pre-qualification of materials, including special performance testing, such as water pressure tests in conduits. The Director shall accept materials that are pre-tested successfully and constructed in-place in accordance with specifications.
    - v. A plan for control or diversion of surface water during construction. The design engineer may determine frequency of storm runoff to be controlled during construction, commensurate with the risk of economic loss during construction.
    - vi. Criteria for blast monitoring and acceptable blast vibration levels, including particle velocities for the dam and other critical appurtenances. Monitoring equipment and monitoring locations shall be specified.
    - vii. Instrumentation material descriptions, placement criteria, and construction requirements and a statement that instrumentation shall be installed by experienced speciality subcontractors.
3. Engineering Design Report Requirements. The engineering design report required by R12-15-1208(7) and R12-15-1210(A)(8) shall include the following:
- a. The seal and signature of the responsible engineer in accordance with A.A.C. R4-30-304.
  - b. The classification under R12-15-1206 of the proposed dam, or for the proposed enlargement of an existing dam or reservoir.
  - c. Hydrologic considerations, including calculations and a summary table of data used in determining the required emergency spillway capacity and freeboard, and design of any diversion or detention structures. The design report shall include input and output listings on both hard copy and computer diskette.

- d. Hydraulic characteristics, engineering data, and calculations used in determining the capacities of the outlet works and emergency spillway. The design report shall include input and output listings on both hard copy and computer diskette.
- e. Geotechnical investigation and testing of the dam site and reservoir basin. Results and analysis of subsurface investigations, including logs of test borings and geologic cross sections.
- f. Guidelines and criteria for blasting to be used by the contractor in preparing the blasting plan.
- g. Details of the plan for control or diversion of surface water during construction.
- h. Details of the dewatering plan for subsurface water during construction.
- i. Testing results of earth and rock materials, including the location of test pits and the logs of these pits.
- j. Discussion and design of the foundation blanket grouting, grout curtain, and grout cap based on foundation stability and seepage considerations.
- k. Calculations and basic assumptions on loads and limiting stresses for reinforced concrete design. The design report shall include input and output listings on both hard copy and computer diskette.
- l. A discussion and stability analysis of the dam including appropriate seismic loading, safety factors, and embankment zone strength characteristics. Analyses shall include both short-term and long-term loading on upstream and downstream slopes. The design report shall include input and output listings on both hard copy and computer diskette.
- m. A discussion of seismicity of the project area and activity of faults in the vicinity. The design report shall use both deterministic and statistical methods and identify the appropriate seismic coefficient for use in analyses.
- n. Discussion and design of the cutoff trench based on seepage and other considerations.
- o. Permeability characteristics of foundation and dam embankment materials, including calculations for seepage quantities through the dam, the foundation, and anticipated in the internal drain system. The design report shall include input and output listings on both hard copy and computer diskette. The design report shall include copies of any flow nets used.
- p. Discussion and design of internal drainage based on seepage quantity calculations. The design report shall include instrumentation necessary to monitor the drainage system and filter design calculations for protection against piping of foundation and embankment.
- q. Erosion protection against waves and rainfall runoff for both the upstream and downstream slopes, as appropriate.
- r. Discussion and design of foundation treatment to compensate for geological weakness in the dam foundation and abutment areas and in the spillway foundation area.
- s. Post-construction vertical and horizontal movement systems.
- t. Discussion of foundation conditions including the potential for subsidence, fissures, dispersive soils, collapsible soils, and sink holes.

**R12-15-1216. Design of a High, Significant, or Low Hazard Potential Dam**

**A. General Requirements.**

- 1. Emergency Spillway Requirements. An applicant shall:
  - a. Construct each spillway in a manner that avoids flooding in excess of the flooding that would have occurred in the same location under the same conditions before construction. The owner of a dam shall demonstrate that a spillway discharge would not result in incremental adverse consequences. In determining whether a spillway discharge of a dam would result in incremental adverse consequences, the Director shall evaluate whether the owner has taken any or all of the following actions: issuing public notice to downstream property owners, complying with flood insurance requirements, adopting emergency action plans, conducting mock flood drills, acquiring flow easements or other acquisitions of real property, or other actions appropriate to safeguard the dam site and flood channel.
  - b. Include a control structure to avoid head cutting and lowering of the spillway crest for spillways excavated in soils or soft rock. In the alternative, the design may provide evidence acceptable to the Director that erosion during the inflow design flood will not result in a sudden release of the reservoir.
  - c. Provide each spillway and channel with a minimum width of 10 feet and suitable armor to prevent erosion during the discharge resulting from the inflow design flood.
  - d. Ensure that downstream spillway channel flows do not encroach on the dam unless suitable erosion protection is constructed.
  - e. Ensure that each spillway, in combination with outlets, is able to safely pass the peak discharge flow rate, as calculated on the basis of the inflow design flood.
  - f. Not construct bridges or fences across a spillway unless the construction is approved in writing by the Director. The Director's approval may include conditions regarding the design and operation of the spillway and fencing, based on safety concerns.
  - g. Not use a pipe or culvert as an emergency spillway unless the Director approves the use following review of the dam design and site characteristics.

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

2. Inflow Design Flood Requirements
  - a. Unless directed otherwise in writing by the Director, the inflow design flood requirements for determining the spillway minimum capacity are stated in Table 4.
  - b. As an alternative to the requirements prescribed in Table 4, the Director may accept an inflow design flood determined by an incremental damage assessment study, based on the relative safety of the alternatives.
  - c. The Director may accept site-specific probable maximum precipitation studies in determination of the inflow design flood.
  - d. An applicant shall ensure that the total freeboard is the largest of the following:
    - i. The sum of the inflow design flood maximum water depth above the spillway crest plus wave run up.
    - ii. The sum of the inflow design flood maximum water depth above the spillway crest plus 3 feet.
    - iii. A minimum of 5 feet.
3. Outlet Works Requirements. An applicant shall ensure that a dam has a low level outlet works that:
  - a. Is capable of draining the reservoir to the sediment pool level. A low level outlet works for a high or significant hazard potential dam shall be a minimum of 36 inches in diameter. A low level outlet works for a low hazard potential dam shall be a minimum of 18 inches in diameter.
  - b. For a high or significant hazard potential dam, has the capacity to evacuate 90 percent of the storage capacity of the reservoir within 30 days, excluding reservoir inflows.
  - c. Has a filter diaphragm or other current practice measures to reduce the potential for piping along the conduit.
  - d. Has accessible outlet controls when the spillway is in use.
  - e. Has an emergency manual override system or can be operated manually.
  - f. Is constructed of materials appropriate for loading condition, seismic forces, thermal expansion, cavitation, corrosion, and potential abrasion. The applicant shall not use corrugated metal pipes or other thin-walled pipes except as a form for a cast-in-place concrete conduit. The applicant shall construct outlet conduits of cast-in-place reinforced concrete. The applicant shall design each outlet to maintain water tightness. The applicant shall construct each outlet to prevent the occurrence of piping adjacent to the outlet.
  - g. Has an operating or guard gate on the upstream end of any gated outlet.
  - h. Has an outlet conduit near the base of 1 of the abutments on native bedrock or other competent material. The applicant shall support the entire length of the conduit on foundation materials of uniform density and consistency to prevent adverse differential settlement.
  - i. Has an upstream valve or gate capable of controlling the discharge through all ranges of flow on any gated outlet conduit.
  - j. Has a trashrack designed for a minimum of 25 percent of the reservoir head to which it would be subjected if completely clogged at the upstream end of the outlet.
  - k. Has an air vent pipe just downstream of the control gate. The applicant shall include a blow-off valve at or near the downstream toe of the dam for an outlet conduit that is connected directly to a distribution system.
  - l. Has an outlet conduit designed for internal pressure equal to the full reservoir head and for superimposed embankment loads, acting separately.
4. Dam Site And Reservoir Area Requirements
  - a. An applicant shall demonstrate that reservoir storage during the inflow design flood will not result in incremental adverse consequences and that the design will not result in the inundation or wave damage of properties within the reservoir, except marina-type structures, during the inflow design flood. In determining whether a discharge will result in incremental adverse consequences, the Director shall evaluate whether the owner has taken any or all of the following actions: issuing public notice to upstream affected property owners, complying with flood insurance requirements, adopting emergency action plans, conducting mock flood drills, acquiring flood easements or other acquisitions of real property, or other actions appropriate to safeguard the dam site and reservoir. Permanent habitations are not allowed within the reservoir below the spillway elevation.
  - b. The applicant shall clear the reservoir storage area of logs and debris.
  - c. The applicant shall place borrow areas a safe distance from the upstream toe and the downstream toe of the dam to prevent a piping failure of the dam.
  - d. The applicant shall keep the top of the dam and appurtenant structures accessible by equipment and vehicles for emergency operations and maintenance.
5. Geotechnical Requirements
  - a. The applicant shall provide an evaluation of the static stability of the foundation, dam, and slopes of the reservoir rim and demonstrate that sufficient material is available to construct the dam as designed.
  - b. The applicant shall not construct a dam on active faults, collapsible soils, dispersive soils, sink holes, or fissures, unless the applicant demonstrates that the dam can safely withstand the anticipated offset or other unsafe effects on the dam.
6. Seismic Requirements

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

- a. The applicant shall submit a review of the seismic or earthquake history of the area around the dam within a radius of 100 miles to establish the relationship of the site to known faults and epicenters. The review shall include any known earthquakes and the epicenter locations and magnitudes of the earthquakes.
- b. The applicant shall identify the location of active or potentially active faults that have experienced Holocene or Late Pleistocene displacement within a radius of 100 miles of the site.
- c. For a high or significant hazard potential dam, the applicant shall design the dam to withstand the maximum credible earthquake.
- d. For a low hazard potential dam, the applicant shall use probabilistic or deterministic methods to determine the design earthquake. The magnitude of the design earthquake shall vary with the size of the dam, site condition, and specific location.

**B. Embankment Dam Requirements.**

1. Geotechnical Requirements. Table 5 states minimum factors of safety for embankment stability under various loading conditions. For an embankment dam an applicant shall provide a written analysis of minimum factors of safety for stability.
  - a. The analysis of minimum factors of safety shall include the effects of anisotropy on the phreatic surface position by using a ratio of horizontal permeability to vertical permeability of at least 10. The Director may require ratios of up to 100 if the material types and construction techniques will cause excessive stratification.
  - b. The applicant shall use tests modeling the conditions being analyzed to determine the strengths used in the stability analysis. The stability analysis shall include total and effective stress strengths appropriate for the different material zones and conditions analyzed. The stability analysis shall use undrained strengths or strength parameters for all saturated materials.
  - c. The applicant shall perform an analysis of the upstream slope stability for a partial pool with steady seepage considering the reservoir level that provides the lowest factor of safety.
  - d. A stability analysis is not required for low hazard potential dams if the owner or the owner's engineer demonstrates that conservative slopes and competent materials are included in the design.
2. Seismic Requirements
  - a. The applicant shall determine the seismic characteristics of the site as prescribed in subsection (A)(6).
  - b. The applicant shall determine the liquefaction susceptibility of the embankment, foundation, and abutments. The applicant shall use standard penetration testing, cone penetration testing, shear wave velocity measurements, or a combination of these methods to make this determination. The applicant shall compute the minimum factor of safety against liquefaction at specific points and make a determination of whether the overall site is subject to liquefaction.
  - c. The applicant shall determine the safety of the dam under seismic loading using a pseudo static stability analysis, computing the minimum factor of safety if the embankment, foundation or abutment is not subject to liquefaction and has a maximum peak acceleration of 0.2g or less, or a maximum peak acceleration of 0.35g or less, and consists of clay on a clay or bedrock foundation. The applicant shall use in the pseudo static stability analysis a pseudo static coefficient that is at least 60% of the maximum peak bedrock acceleration at the site.
  - d. The applicant shall compute a minimum factor of safety against overtopping due to deformation and settlement in each of the following cases. The minimum factor of safety against overtopping can be no less than 2.5, determined by dividing the total pre-earthquake freeboard by the estimated vertical settlement in feet. The applicant shall determine the total vertical settlement by adding the settlement values of the upstream and downstream slopes.
    - i. The minimum factor of safety in a pseudo static analysis is less than 1.0;
    - ii. An embankment, foundation, or abutment is not subject to liquefaction, has a maximum peak acceleration of more than 0.2g or a maximum peak acceleration of more than 0.35g and consists of clay on a clay or bedrock foundation; or
    - iii. The embankment, foundation or abutment is subject to liquefaction.
  - e. The applicant shall perform a liquefaction analysis to establish approximate boundaries of liquefiable zones and physical characteristics of the soil following liquefaction for an embankment, foundation, or abutment subject to liquefaction. The applicant shall perform an analysis of the potential for flow liquefaction.
  - f. Other, more sophisticated analytical procedures may be required by the Director for sites with high seismicity or low strength embankment or foundation soils.
3. Miscellaneous Design Requirements
  - a. The design of any significant or high hazard potential dam shall provide seepage collection and prevent internal erosion or piping due to embankment cracking or other causes.
  - b. The Director shall review the filter and permeability design for a chimney drain, drain blanket, toe drain, or outlet conduit filter diaphragms on the basis of unique site characteristics.
    - i. The minimum thickness of an internal drain is 3 feet.
    - ii. The minimum width of a chimney drain is 6 feet.

**Arizona Administrative Register**  
**Notices of Final Rulemaking**

- iii. The applicant shall filter match an internal drain to its adjacent material.
- iv. The applicant shall design internal drains with sufficient capacity for the expected drainage without the use of drainpipes using only natural granular materials.
- c. The use of a geosynthetic is not permitted in a design if it serves as the sole defense against dam failure. The use of geotextiles and geonets as a filter or drain material or a geomembrane liner is permitted only in a location that is easily accessible for repair or if its excavation cannot create an unsafe condition at the dam. A geosynthetic liner is allowed under special conditions and in specific situations if it is subject to monitoring and redundant safety controls. The Director may impose conditions, including monitoring appropriate to the hazard classification, inspection, and necessary repairs, each performed every 5 years.
- d. The applicant shall use armoring on any upstream slope of an embankment dam that impounds water for more than 30 days at a time. If the applicant uses rock riprap, it shall be well-graded, durable, sized to withstand wave action, and placed on a well-graded pervious sand and gravel bedding or geotextile with filtering capacity appropriate for the site.
- e. The applicant shall protect the downstream slopes and groins of an embankment dam from erosion.
- f. The minimum width of the top of an embankment dam is equal to the structural height of the dam divided by 5 plus an additional 5 feet. The required minimum width for any embankment dam is 12 feet. The maximum width for any embankment dam is 25 feet.

**Table 4. Inflow Design Flood**

<u>Dam Hazard Class</u>	<u>Dam Size Classification</u>	<u>IDF Magnitude</u>
<u>Very Low</u>	<u>All Sizes</u>	<u>100-year</u>
<u>Low</u>	<u>All Sizes</u>	<u>0.25 PMF</u>
<u>Significant</u>	<u>Small</u>	<u>0.25 PMF</u>
	<u>Intermediate</u>	<u>0.5 PMF</u>
	<u>Large</u>	<u>0.5 PMF</u>
<u>High*</u>	<u>All Sizes</u>	<u>*</u>

\* For a high hazard potential dam, the applicant shall design the dam to withstand an inflow design flood that varies from .5 PMF to the full PMF, with size increasing based on persons at risk and potential for downstream damage. The applicant shall consider foreseeable future conditions.

**Table 5. Minimum Factors of Safety for Stability<sup>1</sup>**

<u>Embankment Loading Condition</u>	<u>Minimum Factor of Safety</u>
<u>End of construction case – upstream and downstream slopes</u>	<u>1.3</u>
<u>End of construction case for embankments greater than 50 feet in height on weak foundations</u>	<u>1.4</u>
<u>Steady state seepage - upstream (critical partial pool) and downstream slope (full pool)</u>	<u>1.5</u>
<u>Instantaneous drawdown - upstream slope</u>	<u>1.2</u>

<sup>1</sup> Not applicable to an embankment on a clay shale foundation.

**R12-15-1217. Maintenance and Repair; Emergency Actions**

- A.** An owner shall perform general maintenance and ordinary repairs that do not impair the safety of the dam. General maintenance and ordinary repair activities listed under this subsection do not require prior approval of the Director. These repair activities include:
- 1. Removing brush or tall weeds.
  - 2. Cutting trees and removing slash from the embankment or spillway. Small stumps may be removed provided no excavation into the embankment occurs.
  - 3. Exterminating rodents by trapping or other methods. Rodent damage may be repaired provided it does not involve excavation that extends more than 2 feet into the embankment and replacement materials are compacted as they are placed.
  - 4. Repairing erosion gullies less than 2 feet deep on the embankment or in the spillway.

5. Grading the surface on the top of the dam embankment or spillway to eliminate potholes and provide proper drainage, provided the freeboard is not reduced.
  6. Placing additional riprap and bedding on the upstream slope, or in the spillway in areas that have sustained minor damage and restoring the original riprap protection where the damage has not yet resulted in erosion and weakening of the dam.
  7. Painting, caulking, or lubricating metal structures.
  8. Patching or caulking spalled or cracked concrete to prevent deterioration.
  9. Removing debris, rock, or earth from outlet conduits or spillway channels and basins.
  10. Patching to prevent deterioration within outlet works.
  11. Replacing worn or damaged parts on outlet valves or controls to restore them to original condition or its equivalent.
  12. Repairing or replacing fences intended to keep traffic or livestock off the dam or spillway.
- B.** General maintenance and ordinary repair that may impair or adversely effect safety, such as excavation into or near the toe of the dam, construction of new appurtenant structures for the dam, and repair of damage that has already significantly weakened the dam shall be performed in accordance with this Article. The Director may approve maintenance performed according to a standard detail or method of repair on file with the Department upon submittal of a letter. The Director shall determine whether general maintenance and ordinary repair activities not listed in subsection (A) will impair safety.
- C.** Emergency actions not impairing the safety of the dam may be taken before guidance can be provided by an engineer and do not require prior approval of the Director. Emergency actions do not excuse an owner's responsibility to promptly undertake a permanent solution. Emergency actions include:
1. Stockpiling materials such as riprap, earth fill, sand, sandbags, and plastic sheeting.
  2. Lowering the reservoir level by making releases through the outlet or a gated spillway, by pumping, or by siphoning.
  3. Armoring eroded areas by placing sandbags, riprap, plastic sheeting, or other available material.
  4. Plugging leakage entrances on the upstream slope.
  5. Increasing freeboard by placing sandbags or temporary earth fill on the dam.
  6. Diverting flood waters to prevent them from entering the reservoir basin.
  7. Constructing training berms to control flood waters.
  8. Placing sandbag ring dikes or reverse filter materials around boils at the downstream toe to provide back pressure.
  9. Removing obstructions from outlet or spillway flow areas.
- D.** Emergency actions impairing the safety of the dam require prior approval of the Director. An owner shall not lower the water level by excavating the spillway or embankment unless failure is imminent.
- E.** For all high and significant hazard potential dams, the emergency action plan shall be implemented with any emergency actions taken at the dam.
- F.** The owner shall notify the Director immediately of any emergency condition that exists and any emergency action taken.

**R12-15-1218. Safe Storage Level**

The Director has the authority to determine the safe storage level for the reservoir behind each dam, including the storage level of an existing dam while it is being repaired, enlarged, altered, breached, or removed. The elevation of the safe storage level is stated on the license. The owner shall not store water in excess of the level determined by the Director to be safe. The owner shall not place flashboards or other devices in the emergency spillway without approval of an alteration of the dam in accordance with this Article.

**R12-15-1219. Safety Inspections**

- A.** Except as provided in subsection (E), the Director shall conduct a dam safety inspection annually or more frequently for each high hazard potential dam, triennially for each significant hazard potential dam, and once every 5 years for each low and very low hazard potential dam.
- B.** An engineer is considered qualified to provide information to the Director regarding the safe storage level of a reservoir if the engineer:
1. Meets the criteria in R12-15-1202(11);
  2. Has 3 years of experience in the field of dam safety; and
  3. Has actual experience in conducting dam safety inspections.
- C.** A dam safety inspection includes:
1. Review of previous inspections, reports, and drawings;
  2. Inspection of the dam, spillways, outlet facilities, seepage control, and measurement systems;
  3. Inspection of any permanent monument or monitoring installations;
  4. Assessment of all parts of the dam that are related to the dam's safety; and
  5. A recommendation regarding the safe storage level of the reservoir.
- D.** The engineer shall submit a safety inspection report that describes the findings and lists actions that will improve the safety of the dam. The report shall include the engineer's recommendation of the safe storage level. The engineer shall use a report form approved by the Director.
- E.** Inspections by the Owner

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

1. An owner may provide to the Director, at the owner's expense, a safety inspection report that complies with the requirements of subsections (B), (C), and (D) in place of an inspection by the Department. The owner's engineer shall notify the Director and submit a written summary of the engineer's qualifications at least 14 days before the scheduled safety inspection.
2. The Director may refuse to accept an inspection that does not conform to this Article.

**F. Inspections by the Department**

1. The Director may enter at reasonable times upon private or public property and the owner shall permit such entry, where a dam is located, including a dam under construction, reconstruction, repair, enlargement, alteration, breach, or removal, for any of the following purposes:
  - a. To enforce the conditions of approval of the construction drawings and specifications related to an application for construction, reconstruction, repair, enlargement, alteration, breach, or removal.
  - b. To inspect a dam that is subject to this Article.
  - c. To investigate or assemble data to aid review and study of the design and construction of dams, reservoirs, and appurtenances or make watershed investigations to facilitate decisions on public safety to fulfill the duties of A.R.S. § 45-1214.
  - d. To ascertain compliance with this Article and A.R.S. Title 45, Chapter 6.
2. Upon receipt of a complaint that a dam is endangering people or property:
  - a. The Director shall inspect the dam unless there is substantial cause to believe the complaint is without merit.
  - b. If the complainant files a complaint in writing and deposits with the Director sufficient funds to cover the costs of the inspection, the Director shall make an inspection.
  - c. The Director shall provide a written report of the inspection to the complainant and the dam owner.
  - d. If an unsafe condition is found, the Director shall cause it to be corrected and return the deposit to the complainant. If the complaint was without merit the deposit shall be paid into the general fund.
3. The Director may employ qualified on-call consultants to conduct inspections.
4. Inspections under subsection (A) shall comply with the requirements of A.R.S. § 41-1009.

**R12-15-1220. Existing Dams**

- A.** The requirements of this Article apply to existing dams, except as provided in subsections (B) and (C).
- B.** If the Director has determined that an existing dam is in a safe condition, the owner is not required to comply with R12-15-1216 unless the Director determines that it is cost effective to upgrade the dam to comply with the requirements of R12-15-1216 at the time a major alteration or major repair is planned. In determining whether it is cost effective to upgrade a dam, the Director shall consider:
  1. The hazard potential classification of the dam;
  2. Whether the cost of the upgrade would exceed 25% of the total cost of the major alteration or major repair; and
  3. Whether there is a more cost effective alternative that would provide an equivalent increase in safety.
- C.** If the Director has determined that a dam is in an unsafe condition, the owner shall comply with the requirements in R12-15-1216. The owner is not required to comply with a requirement in this Article if the Director finds that, considering the site characteristics and the proposed design, the requirement is unduly burdensome or expensive and is not necessary to protect human life or property. The Director shall consider the size, hazard potential classification, physical site conditions, and applicability of a requirement to the dam. The Director shall state in writing the reason or reasons the owner is not required to comply with a requirement.
- D.** The owner shall ensure that installation of utilities beneath or through an existing dam is accomplished by open cuts or jacking and boring methods.

**R12-15-1221. Emergency Action Plans**

- A.** Each owner of a high or significant hazard potential dam shall prepare, maintain, and exercise a written emergency action plan for immediate defensive action to prevent failure of the dam and minimize any threat to downstream development. The emergency action plan shall contain a:
  1. Notification chart showing the priority for notification in an emergency situation. The owner shall notify local emergency response agencies, affected downstream populations, county emergency management agencies, and affected flood control districts;
  2. Description of the demand reservoir and scope of the emergency action plan;
  3. Delineation of potentially unsafe conditions, evaluation procedures, and triggering events that require the initiation of partial or full emergency notification procedures, based on the urgency of the situation;
  4. Delineation of areas of responsibility of the owner and other parties. The emergency action plan shall clearly identify individuals responsible for notifications and declaring an emergency;
  5. Specific notification procedure for each emergency situation anticipated;
  6. Description of emergency supplies and resources, equipment access to the site, and alternative means of communication. The emergency action plan shall also identify specific preparedness activities required, such as annual full or partial mock exercises and updates of the emergency action plan; and

7. Map showing the area that would be subject to flooding due to spillway flows and dam failures.
- B.** The owner shall use the Director's model emergency action plan, which is available at no cost, or an equivalent model, for guidance in preparing the emergency action plan.
- C.** The owner shall submit a copy of the proposed emergency action plan for review by the Arizona Division of Emergency Management and all local emergency coordinators involved in the plan. The owner shall incorporate appropriate recommendations generated by the reviews and submit the revised emergency action plan to the Department.
- D.** The owner shall review and update the emergency action plan annually or more frequently to incorporate changes such as new personnel, changing roles of emergency agencies, emergency response resources, conditions of the dam, and information learned from mock exercises. The owner shall send updated portions of the plan to persons and agencies holding copies of the plan within 15 days after preparation of an update.

**R12-15-1222. Right of Review**

- A.** An applicant or owner aggrieved by a decision of the Director regarding the determination of hazard classification, jurisdictional status, or the Director's application of this Article may seek review of an appealable agency action under A.R.S. Title 41, Chapter 6, Article 10.
- B.** An applicant or owner aggrieved by a decision of the Director that requires the exercise of professional engineering judgment or discretion or the assessment of risk to human life or property, such as the adequacy of an applicant's project documentation, dam design, safe storage level, requirements for existing dams, or maintenance, may seek review by a board of review under A.R.S. §§ 45-1210 and 45-1211.
- C.** The following actions are not subject to review:
  1. Emergency measures taken under A.R.S. §§ 45-1212 or 45-1221.
  2. Agency decisions made under A.R.S. §§ 41-1009(E) or (F).
  3. Agency actions made exempt from review by law.

**R12-15-1223. Enforcement Authority**

- A.** The Department may exercise its discretion to take action necessary to prevent danger to human life or property. The Director may take any legal action that is proper and necessary for the enforcement of this Chapter.
- B.** If the Director has cause to believe that a dam is unsafe or a person is violating or has violated a provision of this Article or A.R.S. Title 45, Chapter 6, Article 1, the Director may issue a notice directing the owner to remedy the safety deficiency or correct the violation. The owner may appeal a notice issued under this subsection as an appealable agency action in accordance with A.R.S. Title 41, Chapter 6, Article 10. If the owner does not appeal within 30 days after the date on the notice, the notice becomes final and may be incorporated as a condition of any license based on the duration of the requirement.
- C.** If the Director has cause to believe that a dam is unsafe or a person is violating or has violated a provision of this Article or A.R.S. Title 45, Chapter 6, Article 1, the Director may proceed under A.R.S. § 45-1221 to initiate a contested case under A.R.S. Title 41, Chapter 6, Article 10 by requesting an administrative hearing.
- D.** Following a written decision by an administrative law judge, the Director shall issue a decision and order accepting, rejecting, or modifying the administrative law judge's decision. Upon expiration of time to appeal, the decision and order becomes final and may be incorporated as a condition of any license based on the duration of the requirement.
- E.** If the Director has cause to believe that a dam is unsafe or a person is violating or has violated a provision of this Article or A.R.S. Title 45, Chapter 6, Article 1 the Director may commence an action in a court of appropriate jurisdiction if:
  1. The violation is an emergency requiring appropriate steps to be taken without delay; or
  2. The Director has cause to believe that use of the administrative procedure would be ineffective or that delay would ensue and a deterioration in the safety of the dam would occur.
- F.** If the Director commences an action it shall be brought in a court of appropriate jurisdiction in which:
  1. The cause or some part of the cause arose; or
  2. The owner or person complained of has his or her place of business; or
  3. The owner or person complained of resides.
- G.** A person determined to be in violation of this Article; A.R.S. Title 45, Chapter 6; a license; or order may be assessed a civil penalty not exceeding \$1,000 per day of violation. The Director may offer evidence relating to the amount of the penalty in accordance with A.R.S. § 45-1222.
- H.** A violation of A.R.S. Title 45, Chapter 6, Article 1 regarding Supervision of Dams, Reservoirs, and Projects is a class 2 misdemeanor, in accordance with A.R.S. § 45-1216.

**R12-15-1224. Emergency Procedures**

- A.** The owner of a dam shall immediately notify the Department and responsible authorities in adjacent and downstream communities, including emergency management authorities, of a condition that may threaten the safety of the dam. The owner shall take necessary actions to protect human life and property, including action required under an emergency action plan or order issued under this Article.
  1. A condition that may threaten the safety of a dam includes:
    - a. Sliding of upstream or downstream slopes or abutments contiguous to the dam;

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

- b. Sudden subsidence of the top of the dam;
- c. Longitudinal or transverse cracking of the top of the dam;
- d. Unusual release of water from the downstream slope or face of the dam;
- e. Other unusual conditions at the downstream slope of the dam;
- f. Significant landslides in the reservoir area;
- g. Increasing volume of seepage;
- h. Cloudy seepage or recent deposits of soil at seepage exit points;
- i. Sudden cracking or displacement of concrete in a concrete or masonry dam spillway or outlet works;
- j. Loss of freeboard or dam cross section due to storm wave erosion;
- k. Flood waters overtopping an embankment dam; or
- l. Spillway backcutting that threatens evacuation of the reservoir.

2. In case of an emergency, the owner shall telephone the Arizona Department of Public Safety's emergency numbers at (800) 411-2336 or (602) 223-2000.

**B.** The Director shall issue an emergency approval to repair, alter, or remove an existing dam if the Director finds that immediate remedial action is necessary to alleviate an imminent threat to human life or property.

- 1. The emergency approval shall be provided in writing on a form developed for this purpose.
- 2. The emergency approval may contain conditions the Director determines are appropriate to protect human life or property.
- 3. The emergency approval is effective immediately for 30 days after notice is issued unless extended in writing by the Director. The Director shall also send notice to the county flood control district of the county in which the dam is located, all municipalities within 5 miles downstream of the dam, and any additional persons identified in the emergency action plan.
- 4. The Director may institute legal or administrative proceedings that the Director deems appropriate for violations of the emergency approval or conditions of the emergency approval.

**R12-15-1225. Emergency Repairs**

**A.** The Director shall use monies from the dam repair fund, established under A.R.S. § 45-1212.01 to employ any remedial measure necessary to protect human life and property resulting from a condition that threatens the safety of a dam if the dam owner is unable or unwilling to take action and there is not sufficient time to issue and enforce an order.

**B.** The deputy director may authorize an expenditure not to exceed \$10,000 from the dam repair fund for remedial measures under A.R.S. § 45-1212. The expenditure of any additional funds shall be approved by the Director.

**C.** The Director shall hold a lien against all property of the owner in accordance with A.R.S. § 45-1212.

**R12-15-1226. Non-Emergency Repairs; Loans and Grants**

**A.** If the Director determines that a dam represents a threat to human life and property but is not in an emergency condition, the Director may use the dam repair fund, established under A.R.S. § 45-1212.01, as prescribed in this Article to defray the costs of repair.

**B.** Monies from the dam repair fund may be used for loans and grants to owners as provided in A.R.S. §§ 45-1218 and 45-1219.

**C.** To qualify for a loan or grant from the dam repair fund, a dam shall be classified as unsafe by the Director.

**D.** The Director may authorize grant funds for all or part of the cost of engineering studies or construction needed to mitigate the threat to human life and property created by a dam.

- 1. The Director and the grantee shall execute a financial assistance agreement that includes terms of financial assistance, the work progress, and payment schedule.
- 2. The Director shall disburse grant funds in accordance with the financial assistance agreement.
- 3. The Director shall establish a priority ranking for grants based on factors including the potential for failure of a dam, the number of lives at risk, and the capability of the owner to pay a portion of the costs.

**E.** The Director may loan funds for engineering studies or for all or part of construction as prescribed in A.R.S. § 45-1218.

- 1. The Director and the dam owner shall execute a loan repayment agreement. The loan repayment agreement shall be delivered to and held by the Department.
- 2. The Director shall establish a priority ranking for loans based on factors including the potential for failure of a dam, the number of human lives at risk, and the capability of the owner to pay a portion of the costs.

NOTICE OF FINAL RULEMAKING

TITLE 15. REVENUE

CHAPTER 5. DEPARTMENT OF REVENUE  
TRANSACTION PRIVILEGE AND USE TAX SECTION

PREAMBLE

- 1. Sections Affected**

	<u>Rulemaking Action</u>
Article 14	Amend
R15-5-1404	Amend
R15-5-1405	Amend
R15-5-1408	Amend
- 2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**

Authorizing statutes: A.R.S. §§ 42-1005 and 42-5003  
Implementing statutes: A.R.S. §§ 42-5062 and 42-5071
- 3. The effective date of the rules:**

June 12, 2000
- 4. A list of all previous notices appearing in the Register addressing the final rule:**

Notice of Rulemaking Docket Opening: 5 A.A.R. 3235, September 17, 1999  
Notice of Proposed Rulemaking: 6 A.A.R. 651, February 11, 2000
- 5. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

Name: Ernest Powell, Supervisor  
Address: Tax Research & Analysis Section  
Arizona Department of Revenue  
1600 West Monroe  
Phoenix, Arizona 85007  
Telephone: (602) 542-4672  
Fax: (602) 542-4680  
E-mail: azdor-tra@inetmail.att.net
- 6. An explanation of the rule, including the agency's reasons for initiating the rule:**

The rules provide guidance in the application of transaction privilege tax to persons engaged in business under the transporting classification. As a result of the Department's 5-year review of Article 14, the Department is proposing to amend the rules to conform to current statutes and rulemaking guidelines.

R15-5-1404 and R15-5-1405 are proposed for amendment to clarify that baggage charges and demurrage charges are included in the transporting classification unless the related transporting is excluded from the classification. R15-5-1408 is amended to clarify when transporting by aircraft is taxable under the transporting classification and when it is considered taxable under the personal property rental classification as the rental of the aircraft.
- 7. Reference to any study that the agency relied on in its evaluation of or justification for the final rule and where the public may obtain or review the study, all data underlying each study, any analysis of the study and other supporting material:**

None
- 8. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**

Not applicable
- 9. The summary of the economic, small business, and consumer impact:**

It is expected that the benefits of the rules will be greater than the costs. The amendment of these rules will benefit the public by making the rules conform to current statute and rulemaking guidelines, which will make the rules more accurate as well as clearer and easier to understand. In addition, the amendment of the rules will benefit the public by providing additional guidance regarding the taxability of excess baggage charges, demurrage charges, and transporting by aircraft. These rules only provide guidance in the application of the statute; the statute imposes the tax and

*Arizona Administrative Register*  
**Notices of Final Rulemaking**

---

establishes any deductions. The Department will incur the costs associated with the rulemaking process. Taxpayers are not expected to incur any expense in the amendment of these rules.

**10. A description of the changes between the proposed rules, including supplemental notices, and final rules (if applicable):**

Based on the review performed by the staff of the Governor's Regulatory Review Council, the Department made various nonsubstantive grammatical changes.

**11. A summary of the principal comments and the agency response to them:**

The Department did not receive any written or verbal comments on the rule action after the publication of the rulemaking in the Notice of Proposed Rulemaking.

**12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**

None

**13. Incorporations by reference and their location in the rules:**

None

**14. Was the rule previously adopted as an emergency rule?**

No

**15. The full text of the rules follows:**

**TITLE 15. REVENUE**

**CHAPTER 5. DEPARTMENT OF REVENUE  
TRANSACTION PRIVILEGE AND USE TAX SECTION**

**ARTICLE 14. ~~TRANSPORTING SALES TAX — RAILROADS AND AIRCRAFT CLASSIFICATION~~**

R15-5-1404. Excess ~~Baggage Charges~~ baggage charges

R15-5-1405. Demurrage ~~Charges~~ charges

R15-5-1408. Rental of ~~Aircraft~~ airplanes

**ARTICLE 14. ~~TRANSPORTING SALES TAX — RAILROADS AND AIRCRAFT CLASSIFICATION~~**

**R15-5-1404. Excess ~~Baggage Charges~~ baggage charges**

**A.** Gross proceeds of sales or gross income ~~Income~~ from charges for excess baggage shipped from one point to another point in this state is included in the tax base under the transporting classification except as provided in subsection (B) is taxable.

**B.** Gross proceeds of sales or gross income from charges for excess baggage shipped by motor vehicle from one point to another point in this state is not included in the tax base under the transporting classification if a light motor vehicle fee imposed under A.R.S. § 28-5492 or a motor carrier fee imposed under A.R.S. § 28-5852 is paid to the Department of Transportation on the vehicle used in the transporting.

**R15-5-1405. Demurrage ~~Charges~~ charges**

Gross proceeds of sales or gross income ~~Income~~ from demurrage charges is included in the tax base under the transporting classification unless the transporting to which it relates is excluded from the transporting classification collected on freight shipped from one point to another point in this state and demurrage charges collected on freight shipped from outside the state to a point within the state is taxable.

**R15-5-1408. Rental of ~~Aircraft~~ airplanes**

**A.** Gross proceeds of sales or gross income from transporting by aircraft freight or property from one point to another point in this state is included in the tax base under the transporting classification.

**B.** A charge for the use of an aircraft when a pilot is not provided is rent. Gross proceeds of sales or gross income from the rental or leasing of aircraft is included in the tax base under the personal property rental classification unless a specific deduction or exclusion applies is taxable under the rental of personal property classification (see Article 15).